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THE FUR TRADE OF AMERICA



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American Museum of Natural History.

THE FUR TRADE OF AMERICA

BY

AGNES C. LAUT

"PATHFINDERS OF THE WEST," "VIKINGS OF THE
PACIFIC," "CONQUEST OF GREAT NORTH-
WEST," "LORDS OF NORTH," ETC.

New York

THE MACMILLAN COMPANY

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FOREWORD

Is fur trading founded on cruelty?

For the past few years, there has been a campaign waged in the United States, which almost charges any one wearing a piece of fur with murder.

When that question is asked me, I feel like answering by asking another set of questions — Is child birth cruel? Is any type of birth for animals or humans painless? Should we abolish all birth and strive for the Nirvana of Nothingness because all birth is attended with even greater pain than death? Should we cease to fight for right and award honor to the heroes of war, because the triumph of right must necessarily entail death to those who fight for wrong?

But I do not hurl back this bombardment of counter questions; for I realize they are founded on misconceptions; and I love the creatures of the wilds — feathered and furred — with a passion that has taken me to the open every year of my life and keeps me to-day by preference a resident of the country rather than a denizen of the town. As a girl, I learned to shoot. As a woman, I have never fired a shot at a wild creature, except in the air to scare husky dogs away from molesting the ham and bacon stored in our camp kit; and if I hadn't, they would have eaten our boots. The people, who have accused the fur trade of being founded on cruelty, I notice eat game birds and ham and bacon and roast beef and fresh lamb; but that inconsistency apart, let us face the question without any side issues or inconsistencies — Is fur trading founded on cruelty?

And I answer unhesitatingly — It is not. It is not because the very existence of the fur trade depends on protecting wild life

and conserving the fur bearers. I am not talking of game hogs, who shoot for the love of slaughter, or lust of killing. I am speaking of the fur trade as it is operated to-day in the three greatest fur preserves of the world — Alaska and the United States, Northern Canada and Siberia.

You have to go to the wilds and go only once to realize that natural life is crueler by far than the most careless, thoughtless fur hunter.

In the first place, there is no such thing as a natural death in the wilds.

The rabbits fall victims to the weasel, to the wolf, to the bear, to the lynx, to the marten; and if they didn't they would and do multiply with such terrific rapidity they would and do fall victims to a pest of disease once in six or seven years. Otherwise, they would do what they have done in Australia — become so prolific they perish of starvation.

Each creature in the animal world preys on the creature one degree smaller or weaker than itself. That failing, they eat their own young like rats, or disembowel their mates as the wolves and minks do.

There is next the consideration of the superfluous male. Some animals like the fox mate for life and are monogamous; but the most of the fur bearers fight for a harem; and in that fight, the young are killed and torn, the mothers are injured, and the "bachelors" being the stronger, left in the majority to prey on one another. Seal life is one of the most terrible examples of this. Bad as the cruelties of the poachers were — which have been stopped in order to conserve fur life — they never caused the loss of life among seals that fights for the harem caused every spring in pup life and injuries to the mothers. The story of this will be found in the chapter on seals.

Now the fur trader's prosperity being dependent on the continuance of fur life, his buyer will buy only furs (1) taken prime, that is, taken in the short season of two or three months, when the

fur is perfect, when the mothers are not bearing young, and when the young are full grown; (2) taken by such forms of trapping as do not fever the animal with needless pain; for a fevered animal turns bluish in its skin; and a bluish skin sheds its hairs just as a fevered human patient loses his hair. Hunting with dogs is discouraged and in many fur districts prohibited by law. Poisoned bait is also being prohibited; for fear a mother with young should get it. The long range gun or rifle is a less painful death than to be slowly eaten by a wolf, or to have the blood sucked out alive by a mink or a marten; but the present tendency is to use only the rifle for such big dangerous game as wolf or bear; and use box traps, or deadfall, which kills instantly, for fox, fisher, marten. Game wardens supervise the opening of the box traps. If the prisoner is a lady, the tail is scissored in a ring and she is let go; and if any trapper sends through the mails, or tries to sell a pelt so scissored, his furs are subject to confiscation and he to a fine of \$500. A young fox caught is treated in the same way. So is a fox whose fur would not bring a good price. He is given another year to grow. If the superfluous males were not taken, they would fight among themselves, as the story of blue and white Arctic fox tells in full.

It was not the fur trade exterminated the buffalo. It was the barb wire fence of the settlers; and it was the fur trade saved the buffalo from total extermination and brought it back, as beaver have also been brought back, and Alaska Seal. For the extermination of the Sea Otter, I have no excuses to offer. If the fur trade had had command of the Sea Otter haunts, the Sea Otter to-day would be restored as the Alaska Seal is. What exterminated the Sea Otter was a race of Aleutian Indians crazed with Russian vodka; and that crime was perpetrated when the fur trade was in its infancy and in the hands of savage criminals.

But the greatest triumph of the modern fur trade is in fur farming, as the American Government has carried it out in Alaska Seal and blue fox, and Canadian ranchers in Prince Edward Island. In

ten years more than 1000 fur ranches have sprung up in Canada and the United States; and this is only the beginning of a movement destined to transform the fur trade and do for it what domestic care has done for the race horse, or the pure blood Holstein. Pure blood, registered silver fox fur bearers to-day sell for from \$10,000 to \$35,000 a pair; and when each pup may yield a pelt worth \$1200 to \$2000, it doesn't need telling that the pups get the care of millionaire babies; and the greater the care, the finer the fur and the higher the price.

But why kill these pups at all?

Read the story of the fox if you want to know! Because of the "superfluous male" and his ardent desire to scratch the eyes out of a rival and eat his entrails.

But how about the best Persian lamb from unborn kids? That charge is a plain unvarnished lie. Fur farms are to-day supplying the fur trade with the lamb skins; and as I was penning these words was handed to me a set of Dr. Young's pictures of his famous karakul ranches in California. Can you conceive of any fur farmer, who has imported ewes and rams from Bokhara at a cost of thousands and can resell his breeding stock at from \$500 to \$10,000 a pair, killing "the goose that lays the golden egg"? If so, where would the lambs for next year's supply come from? The charge is too ridiculous to require refutation. When lambs are born prematurely, which happens in the best regulated families, the pelt is saved, of course, which is the sole ground for the charge.

The chapters of this volume consist in part of articles, which have from time to time in the last ten years appeared in magazines, to which I am indebted for permission to use with such corrections and additions as the changes in the trade necessitated.

I emphasize the word "corrections"; for figures that were correct in the fur trade even four years ago are obsolete to-day. In no American industry has the pace gone so fast, and shifted so completely. The War hastened but did not cause this. It was inevitable that America — the biggest buyer of raw furs in the world — would ultimately become the market centre of the fur

world; so we witness fur auctions held three times a year in American centres — Montreal, New York, St. Louis — whose aggregate exceeds the famous fur auctions of London. It was inevitable that America would some day stop shipping her raw furs to London and Germany to be dressed and dyed and manufactured — would some day stop re-importing her own furs at enhanced prices, and would take over the selling, dressing and dyeing and manufacturing of her own raw products.

The War practically stopped the dye industry in Europe; and Americans and Canadians were not slow to transfer that dye industry to this continent. Perfections in dye processes, that read like miracles, followed faster than manufacturers could erect works and train the highly specialized workers needed for the most highly specialized and highly technical industry in the world. This page of the history of the modern fur trade reads as romantically as any story of the hunter on the open field.

When the American Government took over Alaska Sealing, sales were held in St. Louis. That was the beginning of the great sales on this continent. When the War interrupted shipment of fur consignments from Asia to London and Germany, they began coming to this continent in huge volume through Vancouver, San Francisco and Seattle. Money was plentiful in America. It was scarce in Europe. The trade here called for furs. American buyers began scouting for raw fur markets of Asia, South America, Canada, even war-torn Europe. They paid in many cases foolishly high prices. The fashion of summer furs came in a veritable craze. The market became a maw that could not be satiated; and all this swelled the furs pouring into the new sales centres of this country. The fur trade doubled, then quadrupled. Prices jumped and jumped yet again — in one case from 90¢ to \$90 a skin in six years, in another case from 10¢ to \$7 a skin, in yet another from \$200 to \$1800 a skin. Just at this conjunction of the stars came the spectacular successes in fur farming — silver fox, Persian lamb, minkeries. Alaska Seal, Beavers, Buffalo — which had been al-

most exterminated under reckless methods — came back to a plethora of supplies; but still the supplies could not satisfy the demands for furs. People were buying furs who had never bought or worn furs before; and new dye processes were placing good furs within the reach of moderate means in a way new to the trade.

By the time the War was over, America had taken over at least the American part of the world fur trade; and hundreds of thousands of skilled workmen were employed in the industry, where only hundreds had been employed before.

This story is told in Part I of this volume.

It was also inevitable when prices began to ascend with lightning swiftness that shoestring gamblers should jump in the new game; but the game is too chancy and technical for gamblers, who bought reckless of fashions or quality on the hunting field; and these gentry will be shortly shaken out of the fur trade, richer in experience of what is prime fur and what isn't, but poorer in money; and the fur trade will settle down to normal progress in the hands of experienced men.

The fur trade is in the shaking-down process in America now; but it is in America to stay, however prices may be slashed and profits sacrificed in Europe to get the great world trade back.

Part II consists of the Story of the Trapper Afield, whose habitat I know almost as well as I do my own garden, from travel from Labrador to the Arctic Circle and life on the fur field, when a child.

An Appendix gives the fur laws of all the States and all the Canadian Provinces, all of which are now wakening up to the value of fur as a national asset. Only one set of figures need be given to affirm such values. Alaska cost the United States \$7,200,000 in 1867. Up to 1918, Alaska had exported \$80,000,000 of furs.

And again, I emphasize the word "corrections."

Though I have written the technical part of this volume under the tutelage of such authorities as Mr. White of the Canadian Conservation Committee; under such authorities on the field as Hud-

son's Bay men, Colonel Cornwall, the free trader of Edmonton, Revillons of Paris; such buyers as Gottlieb, or Funstens of St. Louis, and a dozen others; the dye chapters practically in some of the big dye works; though I have consulted such authorities as Hornaday on natural life, and Elliot on seals, and followed Brass as to totals, and checked Brass' totals with the sales record of London fur brokers for a hundred years; and though I spent six months going over line by line all the Minutes of the Hudson's Bay Company from 1871 — only the most ignorant quack would aver that the fur figures available to-day could be correct.

The reason for this is self-evident. When prices drop, or the whim of fashion shifts, furs shipped this year may be withheld from the market and not sold for four years, when they will be sold as the output of that year; and the practice works the other way as well. When prices jump, furs stored for years come out of storage and are sold. There is no way of checking what furs come from what centres. Undressed furs are free of duty as they should be. The trapper may post them from Athabasca to St. Louis, or from Wisconsin to Montreal. Northern furs always sell at highest prices, other things being equal. A little local buyer, or agent, may post those furs so received by mail as from one trapping field when they are from another; and buyers may declare they know a skin's habitat from a life experience in buying. They may in many cases; but only this year, it was found 12 million pounds of rabbit from Australia were sold as Canadian, when they had come in by Vancouver. I defy you to tell an Alaskan mink from a British Columbia mink, or a Prince Edward Island silver fox from a Labrador or Athabasca one. Game laws, wardens' stamps, breeders' trade marks are correcting all this; but to the present, the confusion discounts any dependence on figures.

Also the shift of animal life defies scientific tabulation. Ten years ago, I prepared a fur-trade map on America for a leading magazine. We made it as accurate as it could be made from Biological Reports from Washington and Government Reports and

Hudson's Bay Company Reports on Canada. It has been copied and re-copied, stolen and re-stolen; and yet to-day, owing to the increase of animal life in some sections, the extermination in other sections, it is no longer correct. The map I present to-day has been revised and to be correct, will have to be re-revised again to-morrow.

And even the most experienced naturalists disagree, as you will see if you follow Coues and Hornaday, or Dr. Young on Persian Lamb and the Biological Reports of the U. S. Government. I had a funny experience of this, when I first told the *Story of the Trapper* years ago. I met a lifelong independent dealer on Peace River.

"Say," he said, "you are dead wrong. Whoever put that fake over on you about ermine? Trappers never in all time caught an ermine by smearing an axe with grease."

I had the story from a chief factor born on MacKenzie River, and from his daughter, who played with Indian children on MacKenzie River. I think I told it first in the *Youth's Companion* and later in *Outing*. We fought it out and parted good friends, but in revising this book, I had decided to take that paragraph out as doubtful, when I met my same friend.

"Say," he said, "do you know those people were right? I saw the Indians' kids doing that very thing last winter down ——," he mentioned some MacKenzie River point I have forgotten.

And so while I wish to express my deep gratitude to all helpers and informants of facts, *I wish to take on my own shoulders any responsibility for inaccuracies, knowing well the older I grow how little we all know of the secrets of animal life and fur-bearing denizens of the wilds.* Only the study-chair naturalist has a monopoly to absolute accuracy in knowledge of the fur bearer's life; and I have not written this volume as either a naturalist, or a fur trader, but only a passionate lover of the great outdoors, who regards the fur trade as one of the best untold stories of American adventure in the wilds and in industry. The adventures and romance are just as fascinating in the trade as on the hunting field.

A. C. L.

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THE FUR TRADE OF AMERICA

CHAPTER I

IS THE WORLD FACING A PERMANENT SHORTAGE OF FURS? INCREASE IN VALUES, ENORMOUS INCREASES IN NUMBERS OF SKINS SOLD AND TRANSFER OF FUR CENTRES FROM EUROPE TO AMERICA

Is the world facing a permanent shortage of furs?

Lovers of the wild life say it is. Fur dealers say it is not; and both present cogent reasons for their arguments.

It is the oldest industry in the world, fur hunting, fur trading. The cave man, who slew a beast with a club to take a pelt for his own covering, was the world's first manufacturer; and his discovery that a pelt would make clothes for himself and his family led far afield to the exploration of half the world. It was the little beaver led discoverers up the St. Lawrence to the Great Lakes, and from the Great Lakes down North to Hudson Bay and down South from the Mississippi to the Rio Grande, and down the Mackenzie to the Arctic, and across the mountains down the Columbia to the Pacific. It was the little beaver led Peter Skene Ogden's fur brigade from the mouth of the Columbia across what are now the States of Montana, Idaho, Washington, Oregon, Nevada, Utah, Northern California.

And it was the little sable led the Cossacks across Russia to what is now Kamchatka; and it was the sea otter that led the Russians, Americans, Spaniards and Englishmen around the world in crazy little cockle-shell sail boats to explore the Pacific Coast from the Golden Gate to Bering Sea.

It is a page of romance unequalled in all history.

The canoe brigade pushing North to new hunting grounds shunned followers and poachers in their preserve more than a diplomat shuns a modern newspaper reporter. If the fur hunters found fine new fields, where beaver and otter and silver fox and fisher and muskrat and marten and sable were plentiful, they were not going to tell it to rival traders, not they. They were not going to be followed by rivals; and when they came out, either down to St. Louis, or down to Montreal, or over the mountains down the Columbia, they were not going to tell they had made a new find of a fine hunting ground, that would attract other hunters the next year. They even concealed the number of their packs and shipped them out by different ports so the world would not know what was coming from where.

Just as elusive and secretive were the individual trappers out on the ground going the rounds of their traps. If they came on beaver and otter and mink and fisher signs, do you think they were going to advertise the fact to brother trappers? Not they! Ask them about the hunt; and they would answer invariably, then as now — "Poor, very poor, getting scarcer every year."

The very same elusiveness marked the latest development of fur trading in fur farming. Fur farming really began back in the 1880's, in Prince Edward Island; but it was less than ten years ago that the facts came out to the world. The first farmer of silver foxes had been expressing and posting skins from half a dozen post offices before his nearest neighbors knew he was succeeding; and by the time his bank deposits in a dozen different banks had totalled \$225,000 he was selling breeding stock for other silver fox farms up to \$10,000 and \$30,000 a pair. In the twinkling of an eye \$26,000,000 was invested in silver fox farming in Prince Edward Island. Wild bush lands had jumped to higher values than farm lands; and the thing became a mania like oil, or gold. Then came the War; and prices slumped. Pelts would not sell at all in London; and breeding stock dropped to \$100 and \$200 and \$400 a pair. The

pessimists shrieked with glee. "Didn't we tell you it was a soap bubble due to burst?" "You can never raise wild animals in captivity" and so on and on and on; the usual chorus of a gloria when an untried venture goes to smash.

But, presto, barely was the War over, when fashion went fox skin mad; and silver fox skins sold at the fur auctions of Montreal and St. Louis and New York in the spring of 1920 at \$1200 a skin for a single neck piece; and one fox farm of Prince Edward Island, consisting of 220 acres and 66 foxes, sold for \$100,000.

Doesn't look as if fox farming had come to such a bad smash after all, does it?

But if the fur traders and the fur trappers and the fur farmers are secretive and elusive, their secrecy is as an open book compared to the secrecy of the trade — of the dressers and dyers and manufacturers.

The general public may not know it; but the fur trade does. The excellence of fur depends far more on the dresser and dyer and manufacturer than on the trapper. The law protects and forefends the trapper from mistakes. He may not use poison; for that fevers the animal and spoils the pelt and reduces his price. He may not trap out of season; for the fur will be unprime; and the game warden will confiscate it. Furs to the value of \$25,000 have been confiscated from one trapper in Alaska this year. And even if he got the unprime fur past the game warden out to market, unprime fur sheds hairs. It would bring a poor price, a price for only felting and hatting; and the buyers would "spot" him and shun his goods.

So the fur usually comes in good or fair condition from the hunting field. It is in the dressing and dyeing that it will be made or marred; and dressers and dyers are not going to tell one another their secrets and inventions and mysteries. No dime novel could exaggerate the mystery of these dyes and processes. To the secret rooms, no outsider is ever admitted. Formulas are written in code, and much of the process can only be learned man from man, and

conveyed by seeing and trying out. When the War demoralized the European dye centres — London, Paris, Leipzig — American firms hurried to Europe and hired the expert dyers and dressers, paying them literally higher remuneration than crown princes and crown princesses of Europe draw. Sorters of furs get \$6500 for three months' work, twice as much as a professor gets for a year. Good fur dressers, mere boys many of them, draw from \$100 to \$105 a week. By the time the War was over, America was doing the huge dye business which Europe had done, though Europe was slashing prices 50% to try to woo back the lost trade. The best fur dyers of Europe represent sixty years of effort and trial. I know one American firm that brought over its dyers from Leipzig when the War broke out. It sacrificed 20,000 muskrat pelts in one experiment to get tints just right and 100,000 rabbit skins in another experiment. It is now dyeing muskrat by the half million a season, and rabbits yearly in quantities running from seven to eighteen millions. I know another firm that twenty years ago was treating 100,000 muskrats a year. It is now treating four million a year; and it declares the trade demand is stronger and stronger than it can ever fill. Mystery, romance, adventure, secrecy, chances to satiate the soul of a gambler — all have marked the fur trade from the time the little beaver on the East and the little sable to the West lured the discovery and exploration of a continent, down to our own days, when America captured the great fur sales of Europe and followed up this capture by getting the European dye processes and improving on them.

Has the last chapter of the great fur romance been written?

Have we reached, or are we reaching, the extinction of all furs?

It is a pretty big question; and it is a very serious one; for there is no material will take the place of fur as protection against cold.

The increase in the value of individual furs is something staggering and almost incredible.

The trapper to-day sells some small furs for more than he could realize on an ordinary gold nugget. He comes out of the wilds

TRANSFER FROM EUROPE TO AMERICA 5

with a bag of pelts to-day representing six months' work, on which he realizes more than the old California Forty-Niner realized on a bag of gold dust.

Figures are tiresome; but look at this scale of figures and translate it in terms of silver fox neck pieces sheeny as silver, or sable soft as a veil of down, or broadtail with the lustre of onyx, or beaver golden brown as autumn leaves in a mid-day sun, with the very tang of the wilds and smell of the woods and crackle of ozone frost in the romantic atmosphere of furs.

Imports of furs to the United States have gone up 250% in four years.

In 1870, there were only twenty-one fur firms in New York. There are now thousands.

1875		1913	1920
Beaver	\$1.00	\$8.00	\$17.50 to \$20.00
Ermine50	1.50 to \$5.00	.50 to 4.00
Fisher	5.00	15.00 to 50.00	143.00 to 345.00
Silver fox	50.00	125.00 up	300.00 to 1225.00
Black fox	100.00	500.00	
Fur seal	10.00	30.00 to 125.00	146.00 to 165.00
Lynx	3.00	12.00 to 50.00	45.00 to 60.00
Marten	2.00	2.50 to 20.00	18.00 to 60.00
Muskrat10 to .12	.40 to 1.00	5.00 to 7.50

Otter, which I have bought from trappers in British Columbia at \$25 for two perfect skins, brought in Montreal and New York this spring \$100 for the best pelts.

English dealers used to pay 10¢ a pound for rabbit, to be dyed and resold as Near and Electric seal. This year England has paid as high as 50¢ a pound and imported 90,000,000 rabbits. In the New York auction sales, best Australian rabbit sold at from \$1.40 to \$3.15.

In 1919, muskrats, which you will buy dyed as Hudson seal, or imitation mink, were selling up at Norway House, north-east of Lake Winnipeg, for 50¢. By 1920, they were selling at \$5.

In 1914, white fox was at \$16. By 1917, it was \$20. By 1920, white fox sold in Montreal at \$60 to \$70.

Beavers that were \$6.50 in 1917 were \$8.50 by 1918 and \$20 by 1919.

The world fur sales dispose of 100,000,000 pelts a year, not counting rabbit and mole and muskrat.

In the April sales of three great fur markets in 1920, almost 4,000,000 skins were sold in the New York market, nearly 9,000,000 on the London market, and over 7,000,000 on the St. Louis market. Add to this the Montreal sales; multiply by three sales a year; and you have almost 100,000,000 skins sold yearly in the United States and Canada, including rabbits, mole and muskrat.

Montreal thinks nothing of a fur sale totalling \$5,000,000 to \$6,000,000; St. Louis \$27,000,000 to \$30,000,000; and New York \$12,000,000 to \$27,000,000.

Before the War, the United States had a total fur trade — what we bought and what we sold — of \$40,000,000. To-day, that trade is over \$100,000,000.

In the environs of New York only are 830 manufacturers of furs, 170 importers of furs, 25 firms devoted exclusively to dressing furs and 12,000 skilled dressers and dyers, supporting a population of 60,000 people drawing their living from furs.

That is — there are more people making a living out of furs round New York only than there are hunters and trappers from the Rio Grande to the Arctic Circle.

In the palmyest days of the palmyest past, when it had not a rival from Hudson Bay to the Pacific or from the Arctic to the Missouri, the Hudson Bay did not sell half a million dollars' worth of furs. To-day furs of a greater value pass through Edmonton alone, and it is now only one of a dozen great companies operating in America.

The world is doing the greatest fur business in all its history. The world appetite for furs is an insatiable demand that cries for more, the more it gets. With high power silent rifles, with newly

rich, with the fashion for summer furs, with tramp steamers and free hunters owing responsibility to no man penetrating Farthest North and offering crazy Klondike prices to trappers, how long are our furs going to last? Hasn't the buffalo been practically exterminated except for park preserves? Wasn't the beaver becoming almost extinct, when the Canadian provinces — especially Quebec and Ontario — clapped on closed seasons some eighteen years ago? Before the rise of the Bolsheviki, hadn't Russia put a closed season on sable? Like the buffalo, hasn't sea otter — the most beautiful fur of all peltries — almost vanished? It used to be taken in the Aleutians in the hundreds of thousands. In the 1920 spring fur sales, only three were offered in New York, only fifteen in London, only seven in St. Louis. And before Pelagic Sealing was stopped by International Treaty, wasn't the beautiful Alaska seal going the same way? Won't the fate of chinchilla and mink and marten and sable be the same? Isn't the last chapter of the great fur romance being written? Aren't we reaching the extinction of all game?

The very note of pessimism in that question answers itself.

Beaver have come back.

Alaska seal has come back.

Silver fox are more plentiful than ever.

Buffalo have multiplied from a few hundred in one Canadian park to 5000 in ten years, and if half a dozen sea otters could be captured unharmed alive, there is not the slightest doubt they could be brought back to a plentiful supply.

And Persian and Astrachan and Krimmer lambs are being bred in America and just beginning to come on the market as fur.

Skunk has been trapped in America for two hundred years and is more plentiful on the fur market than ever before.

Rabbits are such a pest in Australia, poison and trap have failed to exterminate them; and in certain sections they have ruined the pasture.

Muskrats are coming to the market in millions; and so prolific

are they in their habits, there is not a hint of the supply falling off.

Beaver has been brought back through a few years of closed seasons. Indeed, in Algonquin Park, Canada, where it was especially protected, it became so plentiful, adjacent sections asked leave to destroy beaver dams to prevent flooding of lands.

The Alaska seal had dwindled to a few thousands a year on the market, when the stoppage of Pelagic Sealing gave the mothers and pups a chance to live; and now the Alaska seal has so multiplied in less than ten years that by 1922, it is expected there will regularly be not less than 100,000 young Alaska male seals yearly on the fur market.

Only ten years ago, I asked one of the greatest fur merchants in the world — a man who deals from Persia and Siberia to Alaska and Athabasca — what he thought of silver fox farming. "We tried," he said, "and it didn't succeed." Yet to-day there are 36 fox farms in the United States, 29 other fur farms in the United States, and in Canada, not less than 100 fox farms, besides 1000 fur farms of mink, karakul sheep, skunks, raccoons, beaver. In many cases, the fur farm is simply an adjunct to other farming; but the fox farms are exclusively devoted to fox.

Closed seasons, fur farms and game preserves have restored beaver, Alaska seal, fox, buffalo. High markets may stimulate the pursuit of fur-bearing animals; but they also stimulate the preservation. The little furs, of which the greatest number are taken, are also the most prolific of animals; and the danger of muskrat and rabbits is of their multiplying to the point of self-extirmination through pest and starvation.

Without attempting to enumerate all the great fur companies now doing an enormous business in America, it may be stated that the raw furs converge to some half dozen places: in Canada to Montreal, Winnipeg and Edmonton; in the United States to St. Paul, St. Louis, San Francisco, Chicago and New York. Only St. Louis, Montreal and New York are in the true sense fur markets

for the world. Others are London, Leipzic, Nijni Novgorod for England, Germany and Russia. To these great marts come all the best furs of the whole world, the sea otter of the Aleutian, the beaver and marten and mink of Hudson Bay, the ermine and sable of Russia, the lamb skins of Persia, the nutria and chinchilla of South America. Here congregated all the buyers of the fur world and the sellers, though the actual purchasing was done by expert fur brokers.

In London the furs were sold by auction at such well-known sales as Lampson's, Nesbitt's and the Hudson's Bay Company. After thorough examination of the pelts as classified, the buyers assembled before the auctioneer—sometimes in a huge glass-lighted room at the top of the warehouses, or away from the furs altogether in some regular sales room. At the fur sales, a silent nod of the head knocked down a bid.

Formerly, these sales were more picturesque. They were held at some well-known coffee-house, with the classified pelts stacked up at one side. Buyers were regaled with sumptuous dinners by the sellers. Then, a lighted candle with pins stuck in at intervals was put up. This is what is meant by the announcement "sales by inch of candle." Bids were received as the candle burned from pin to pin—quick work, for the candle was a pencil-like thing. The last bid was the one before the flame went out; and to that bidder went the furs. March, January and November seem always to have been the favorite months for the fur sales in London. The furs sold were not necessarily those recently come to market. It was a trick, almost a clairvoyant sixth sense, to scent the coming vagaries of fashion, and when a rare fur was down in price to buy it up and store it in warehouses till fashion's pendulum swung round again, when out would come the same raw fur to be auctioned at a higher price.

The Leipzic fur sales took the form of a great Fur Fair at Easter. Warehouses that had been closed as dungeons for the year, hiding secrets of famous dyeing processes from rivals and which no one could enter or leave without being searched, not even trusted

workers, now opened to the public like a flower to spring. Thither flocked buyers and sellers from America, from Persia, from China, from Siberia, from Japan, from Tibet, from England, from South America. Quaint costumes were seen in the streets. For two weeks the fair lasted, a curious relic of bygone customs come down to modern days. The broker was an expert at haggling, the seller at holding off, so that as merry a game of bartering went on as with the fish-wife who comes to market at four in the morning that she may have the pleasure of refusing customers till mid-day.

Why should Germany, which is not one of the great fur producers, be famed as a market for furs? The secret was in the dyeing and dressing. Whole hamlets and towns were given over to the dressing of raw furs. Austria and Russia produce the best squirrel skins for linings in the world; but the skins from both must be sent to Germany to be dressed. Sometimes the secret was in getting the oil out of the pelts without tingeing the white fur yellow, as in the case of ermine and white fox and Polar bear. Again, other dressers polished the furs with inferior grease instead of butter; or deodorized them imperfectly instead of tramping with mahogany sawdust. Other raw fur fairs were held in Germany, but they were for the local product, not the world market.

In Russia, fairs are also the method of selling raw furs: at Irbit in February, at Ischim in December, at Nijni Novgorod in August. And to Kiatka, on the border of China, blue-gowned mandarins and merchant princes and Chinese nobles still come for the ermine and the marten and the sable of Siberian wilds, as their ancestors came two hundred years ago to barter with wild Cossacks and Siberian bandits and Chuckchee traders and Alaskan sea otter hunters. China produces very few furs and those of poor quality; but the Chinese grandee has as great a passion for fine fur trimmings as the London grand dame for Jager diamonds and Burmah rubies. Long before the Western world had awakened to the beauty of seal and sea otter, there was a high-priced market for both in China.

But the great fur fair of the year in Russia — the one which

is a world market — is at Nijni. For a year by flat-bottom raft boat, by reindeer sled, and by long dusty Persian caravan, the furs have been on their way to Nijni. The little place doubles and quadruples in size like a mushroom city. By August, the fair is open. Here, chiefly, are sold the furs of Asia — Persian and Astrachan lamb, Mongolian goat, Siberian sable and ermine, the great timber wolf, the rare squirrel-skin linings — gray almost to silver, or black and glossy as jet — and a few, the very few of the diminishing sea otter and seal. There, as Kipling says of the Suez, East and West meet — the furs brought down by canoe and dog-train from the Canadian Northwest jostle with the pelts brought by reindeer and caravan from Siberia and Persia.

Now come back to the question — Is the world facing a starvation in furs?

Take a map of the Northern fur country. Take a good look at it — not just a Pullman car glance. The Canadian Government have again and again advertised thousands, hundreds of thousands, millions of acres of free land. Latitudinally, that is perfectly true. Wheat-wise, it isn't. When you go seventy miles north of Saskatchewan River (barring Peace River in sections) you are in a climate that will grow wheat all right — splendid wheat, the hardest and finest in the world. That is, twenty hours of sunlight — not daylight but sunlight — force growth rapidly enough to escape late spring and early fall frosts; but the plain fact of the matter is, wheat land does not exist north of the Saskatchewan except in sections along Peace River. What does exist? Cataracts countless — Churchill River is one succession of cataracts; vast rivers; lakes unmapped, links and chains of lakes by which you can go from the Saskatchewan to the Arctic without once lifting your canoe; quaking muskegs — areas of amber stagnant water full of what the Indians call mermaid's hair, lined by ridges of moss and sand overgrown with coarse goose grass and the "reed that grows like a tree" — muskrat reed, a tasselled corn-like tufted growth sixteen feet high — areas of such muskegs mile upon mile. I traversed one

such region above Cumberland Lake seventy miles wide by three hundred long where you could not find solid ground to camp the size of your foot. What did we do? That is where the uses of a really expert guide came in; moored our canoe among the willows, cut willows enough to keep feet from sinking, spread oil cloth and rugs over this, erected the tents over all, tying the guy ropes to the canoe thwarts and willows, as the ground would not hold the tent pegs.

It doesn't sound as if such regions would ever be overrun by settlement — does it? Now, look at your map, seventy miles north of Saskatchewan. From the north-west corner down in Labrador is a distance of more than 3000 miles. From the South to North is a distance of almost 2000 miles. I once asked a guide with a truly city air if these distances were "as the crow flies." He gave me a look that I would not like to have a guide give me too often — he might maroon a fool on one of those swamp areas.

"There ain't no distances as the crow flies in this country," he answered. "You got to travel 'cording as the waters collect or the ice goes out."

Well, here is your country, 3000 by 2000 miles, a great fur preserve. What exists in it? Very little wood, and that small. Undoubtedly, some minerals. I myself saw brought by an Indian from some unknown mine on Churchill River a piece of pure natural copper the size of a man's hand. What else exists? A very sparse population of Indians, whose census no man knows, for it has never been taken; but when the total Indian population of Canada is only 100,000 and you deduct from the total those on reserves and those on the Pacific Coast, it is a pretty safe guess to say there are not 20,000 Indians all told in the North fur country. I put this guess tentatively and should be glad of information from any one in a position to guess closer. I have asked the Hudson's Bay Company and I have asked Revillons how many white hunters and traders they thought were in the fur country of the North. I have never met any one who placed the number in the North at more than 2000. Spread 2000 white hunters with 10,000 Indians

— for of the total population half are women and children — over an area the size of two-thirds of Europe — I ask you frankly, do you think they are going to exterminate the game very fast? Remember the climate of the North takes care of her own. White men can stand only so many years of that lonely cold, and they have to come out; or they dwarf and degenerate.

Take a single section of this great Northern fur preserve — Labrador, which I visited some years ago. In area, Labrador is 530,000 square miles, two and a half times the size of France, twice the size of Germany, twice that of former Austria-Hungary. Statistical books set the population down at 4000; but the Moravian missionaries there told me that including the Eskimos who come down the coast in summer and the fishermen who come up the coast in summer the total population was probably 17,000. Now Labrador is one of the finest game preserves in the world. On its rocky hills and watery upper barrens where settlement can never come are to be found silver fox — the finest in the world, so fine that the Revillons have established a fur-trading post for silver fox on one of the islands — cross fox almost as fine as silver, black and red fox, the best otter in the world, the finest marten in America, bear of every variety, very fine Norway lynx, fine ermine, rabbit or hare galore, very fine wolverine, fisher, muskrat, coarse harp seal, wolf, caribou, beaver, a few mink. Is it common sense to think the population of a few thousands can hunt out a fur empire here the size of two Germanys?

Now take another look at the map! Where the Saskatchewan takes a great bend 300 miles north-east of Prince Albert, it is no longer a river — it is a vast muskeg of countless still amber water channels not twice the width of your canoe and quaking silt islands of sand and goose grass — ideal, hidden and almost impenetrable for small game. Always muskeg marks the limit of big game and the beginning of the ground of the little fellows — waupoos, the rabbit, and musquash, the muskrat, and sakwasew, the mink, and nukik, the otter and wuchak or pekan, the fisher. It is a safe wager

that the profits on the millions upon millions of little pelts—hundreds of thousands of muskrats are taken out of this muskeg alone—exceed by a hundredfold the profits on the larger furs of beaver and silver fox and bear and wolf and cross fox and marten.

Look at the map again! North of Cumberland Lake to the next fur post is a trifling run of 250 to 300 miles by dog train to Lac du Brochet or Reindeer Lake—more muskeg cut by limestone and granite ridges. Here you can measure 400 miles east or west and not get out of the muskeg till you reach Athabasca on the West and Hudson Bay on the East. North of Lac du Brochet is a straight stretch of 1000 miles—nothing but rocks and cataracts and stunted woods, “little sticks” the Indians call them—and sky-colored waters in links and chains and lakes with the quaking goose grass and muskrat reed cut and chiselled and trenched by the amber water ways.

If you think there is any danger of settlement ever encroaching on the muskegs and barrens, come with me on a trip of some weeks to the south end of this field.

We had been pulling against slack water all day, water so slack you could dip your hand down and fail to tell which way the current ran. Where the high banks dropped suddenly to such a dank tangle of reeds, brushwood, windfall and timbers drifted 1500 miles down from the forests of the Rocky Mountains—such a tangle as I have never seen in any swamp of the South—the skeleton of a moose, come to its death by a jump among the windfall, marked the eastern limit of big game; and presently the river was lost—not in a lake—but in a swamp. A red fox came scurrying through the goose grass, sniffed the air, looked at us and ran along abreast of our canoe for about a mile, evidently scenting the bacon of the “grub box.” Muskrats fed on the bulb of the tufted “reed like a tree” 16 feet high on each side; and again and again little kits came out and swam in the ripple of our canoe. Once an old duck performed the acrobatic feat over which nature and anti-nature writers have been giving each other the lie. We had come out of

the long amber channel to be confronted by three openings exactly alike, not much wider than the length of our Klondike canoe, all lined by the high tufted reed. MacKenzie, the half-breed rapids man, had been telling us the endless Cree legends of Wa-sa-kee-chaulk, the Cree Hiawatha, and his Indian lore of stagnant waters now lured him into steering us to one of the side channels. We were not expected. An old mother duck was directly across our path teaching some twenty-two little black bobbling downy babies to swim. With a cry that shrieked "leg-it, leg-it" plain as a quack could speak and which sent the little fellows scuttling, half swim, half run, the old mother flung herself over on her back not a paddle's length ahead of us, dipped, dived, came up again just at our bow and flopped broken-winged over the water ahead of us near enough almost to be caught by the hand; but when you stretched out your hand, the crafty lady dipped and dived and came up broken-winged again.

In winter, this region is traversed by dog train along the ice — a matter of 500 miles to Lac du Brochet and back, or 600 miles to Prince Albert and back. "Oh, no, we're not far," said a lonely faced Cambridge graduate fur trader to me. "When my little boy took sick last winter, I had to go only 55 miles. There happened to be a doctor in the lumber camp back on the Ridge."

But winter is not all easy in a 50 below zero climate where you can't find sticks any larger than your finger to kindle night fire.

Does it sound very much to you like a region where the settler would ultimately drive out the fur trade? What would he settle on? That is the point. Nature has taken good care that climate and swamp shall erect an everlasting barrier to encroachment on her game preserves.

To be sure, if you ask a fur trader, "How are furs?" he will answer, "Poor — poorer every year." So would you if you were a fur trader and wanted to keep out rivals. I have never known a fur trader who did not make that answer.

"The last chapter of the fur trade has been written?" Never! The oldest industry of mankind will last as long as mankind lasts.

CHAPTER II

WHAT BROUGHT THE FUR MARKETS OF THE WORLD TO AMERICA?

IN three different places in the spring of 1920 there occurred scenes that marked a complete shift in the current of a world trade. These were the fur auctions of Montreal, New York and St. Louis.

A hundred years ago, there used to float down the Ottawa and St. Lawrence to Montreal, down the Mississippi and Missouri to St. Louis, flotillas of canoes and flat-bottomed scows and York boats loaded to the water line with peltries and manned by grizzled voyageurs who hadn't seen a razor or a barber's shears for a year. In Montreal, the fur brigade arrival was celebrated by a Fur Fair in which every kind of firearm and gew-gaw was bartered with the voyageur or trappers for the pelts from the North Country. By fall, these peltries had been sorted and shipped by slow sail boat for England, where they usually arrived about December. By spring, they had been still more carefully sorted and dressed, and were now sold to the world trade in a series of auctions, the most important one being held in March or April.

Down at St. Louis, there was no Fur Fair. The great Fur Fairs of the Mississippi and Missouri were celebrated high up the hinterland of the mountains in Pierre's Hole below the Three Tetons, or in Ogden's Hole in Utah; but the arrival of the boats and canoes from the Up Country at the muddy flats of St. Louis was celebrated noisily, bibulously and hilariously. The men of the mountains with long hair tied back by twisted colored handkerchiefs, or topped by coon caps, and dressed otherwise in buckskin from coat



Courtesy Furston Bros., St. Louis.

Sorting Furs in St. Louis before a Scale.



Note the Depth of Beaver Compared to Nutria.

to moccasins, men who strode erect as an Indian or an arrow, if they had not had too much Jamaica rum — literally owned the little frontier town.

Here, too, the furs were again sorted and shipped down the river to New Orleans to go out by sail boat to New York and London and Hamburg. The Napoleonic Wars had bedevilled international currency; so the boats of the American fur trader did not bring back gold. Instead, they brought back merchandise, Japanese silks, Chinese teas, London wools and cottons and cambrics and beads, Hamburg rifles and powder and ball and awls and traps and sugar and flour and rice, to be sent back up the same long lonely canoe trail to the trappers' rendezvous in the Rockies.

By 1800 to 1820, Fur Fairs had long since passed away in New York; but John Jacob Astor was in the midst of his great fight to wrest the fur trade from the two great Canadian companies, the Hudson's Bay and the Nor'-Westers. They were too strong for him. They beat him off the field up in the mountains and on the mouth of the Columbia; but while the New York genius of the Yankee fur trade was beaten at a staggering loss to his hard-earned savings, the Bostonnais — those merchants to the Far East, who had outfitted the discoverer of the Columbia — were reaping a golden harvest in sea otter along the Pacific Coast far north as Alaska; but their furs, too, were shipped abroad — to China, or Hamburg, or London.

America at that time was only a trader in furs, not a dresser, nor manufacturer.

And now time swings round the cycle of another century after another great war; and there are held in Montreal and New York and St. Louis great world fur auctions, which have practically wrested the world fur trade — in part if not in whole — from Europe to America.

For months bales and bundles and bags and express and freight and mail lots of raw furs of every variety under the sun have been pouring into the fur auction rooms of each city. There are about

sixty distinct varieties of merchantable furs, and all represented in the fur auction storerooms. There are skunk from Minnesota and Wisconsin. There are muskrat from Chesapeake Bay and New Jersey meadows and Cumberland Lake of the Far Northern Winterland. There are opossum from the South and "coon," too, from the South, though the best striped darkest coon comes from the North. There is mink from Hudson Bay and Athabasca, and kolinsky from Japan and China, and sable from Siberia and pine marten from British Columbia, and otter from Labrador and Kamchatka, and silver fox from the fox farms of Prince Edward Island and the wild lands of the Far North. There is cross fox from Saskatchewan and red fox from Minnesota and beaver from Northern Ontario and white fox from the Arctic and blue fox from Alaska. There are Alaska seals from the Commander Islands, and Japanese seals not quite so good from off the Japanese Coast and a few Russian seals ranking third.

There are not more than two or three sea otter at each sale; for this most beautiful of the world furs is almost extinct. Lynx and badger soft as swan's down are here from Canada and the Northwestern States. Rabbits are here in millions, chiefly from Australia and Belgium. Fisher and otter — the aristocrats of the connoisseur's favorite fur — are present in a few thousand each, with only a few chinchilla, squirrel in almost a million, and mole in millions. Call them the velvet or pansy furs.

For three months the sorters have been at work on these furs — as told elsewhere, paid \$6000 and \$7000 and \$10,000 for three months' work — putting them into as carefully graded bundles as wheat buyers grade wheat, or apple buyers grade fruit. Certain floors of the warehouses are given over entirely to certain furs. Of the grading and sorting, a layman may not speak. It is more ticklish work than awarding a prize in the Royal Academy. Some of the furs are graded as to size. Some are graded as to age and called kits. Then these goods are subdivided into firsts, middlings and thirds. Furs not prime — taken out of season, or spoiled in

the skinning, or dulled in the curing — are placed at the very bottom of grades and usually sold only for hatting and felting or fillings, which explains to the outsider why at the same sale silver fox sold at \$1200 and also sold at \$1.50, why a small mink skin sold at \$60 and another larger at 50¢.

You will hear a true fur trader grit his teeth over these sales of unprimes. "Here," he says, "is a young silver fox spoiled by a fool in the trapping. If this young fellow had been allowed to grow up, he would have brought \$800; but now, bah, \$1.50, wasting the trade's time."

The buyers fall on the unprimes with the ferocity of wolves. The fur trade wants to slaughter the prices of the unprimes off the market.

The trapper may ship direct to the fur auction with his name tagged to the back of the pelt and a game warden's stamp, for in most of the States and Provinces, the trapper has had a license and conformed with the local law; or he may sell to a local trader, who ships to the big auction. For the fur so shipped forward a certain advance is made, rendered possible by the banks financing the fur auction corporations. For selling the furs a commission is charged of 5 to 6% with a discount. All transactions are necessarily on a cash basis; for the furs sold in April must afford the trader back on the hunting field cash resources to buy his goods for trade the following autumn. Each of the fur auction corporations is financed by subscription to a joint stock company, which can pledge its joint stock to the banks for credit to advance a percentage of purchase money to the individual shipper. All this is to facilitate quick action in a big wide area of a complicated, highly complex and technical industry.

Each trader if he thinks his pelts are being knocked down at a price too low has the privilege of buying in his own goods; but once the hammer has knocked down, the bids are irrevocable.

For a month before the auction, buyers from every part of the world frequent the storerooms. Dressed in linen dusters, they are

escorted by attendants also dressed in linen dusters from room to room and shelf to shelf where they can personally inspect the furs and take their numbers, grade and classification. The prospective bidder is then given a book of catalogued furs in which he can mark what he intends to buy.

Promptly at 9, the sale opens in some large assembly hall. No more are the furs visible at the auction as they were in the old Fur Fair days. When only \$500,000 of furs would be sold by a company in London in a year in three different sales, it was possible to display the goods; but with one single auction now totalling \$12,-000,000 to \$27,000,000 this is no longer possible.

The sale is not noisy and clamorous. It is silent, tense, swift. An electric sign behind the auctioneer's head announces the number of the catalogue. The buyers open their books to the number. We'll say it is fitch. The classification is so fine, there is no mistaking the quality and grade and age. Behind the auctioneer stands "a spotter." At each side of him sits "a spotter." The auctioneer names a possible price. A bidder lifts his finger, or his pencil, or nods his head that he will buy at that figure. The auctioneer calls the figure. A man to right or left outbids by a lift of his finger, or nod of the head. The spotter shouts "up," "up." A whack of the gavel; and the fur is gone.

In this way have furs to the value of \$2,000,000 been sold in a day, and furs to the value of \$27,000,000 sold in a week. I look back over the reports of the great fur auctions of London for a term of years. The sales total 37,000 to 60,000 coon at Nesbitt's in 1905 and 1912; 739,000 to 658,000 muskrat; 124,000 to 326,000 skunk. Or I look over the Hudson's Bay Company—1855: 136,513 marten; 55,740 mink; 346,955 muskrat; 480 silver fox; 15,000 wolf; 5000 lynx; 1500 ermine; 5800 squirrel. Then I look over the sales of 1920: London, 66,000 coon; 661,000 muskrat; 1,100,000 skunk; 18,000 marten; 38,000 mink; 700 silver fox; 80,000 wolf; 700 lynx; 200,000 ermine; almost 1,000,000 squirrel. Or the St. Louis sales in May, 1920: 22,500 marten, 97,000 mink,

1,100,000 muskrat; 1,500 silver fox; 400,000 skunk; 34,000 lynx and cat; 295,000 ermine; 1,200,000 squirrel.

Look at the figures and compare them.

The sale is very swift and very tense; but it doesn't look to me as if furs were decreasing. Also considering the first fur auction was held in St. Louis in 1913, the first in New York in 1916, and the first in Montreal in 1920, it looks as if the Fur Fairs had come back to America to stay.

What brought the Fur Fairs, or fur auctions back to America?

Primarily, the War; but even if there had been no War, the treaty stopping Pelagic Sealing would have forced a shift in world fur markets. It will be recalled when Pelagic Sealing was stopped that the American Government took hold of the care and management and preservation of seal life on the Pribilof Islands. In order to preserve the female life and the pup life, it was necessary to kill a certain number of the riotous young males each year. These skins were sent to St. Louis to be sold by public auction. They were ultimately dressed and dyed in St. Louis by the same processes used in the famous seal-dyeing establishments of London, which made the London-dyed seal renowned for a hundred years. This is a long story and one that will be told by itself. St. Louis had from its very birth been a great fur centre; so the auctions were planned by the renowned firm of Funston Brothers.

Simultaneously came the War. These convergings of different factors to the same end are what one grows to regard as destiny. With the War, shipping from Australia and Russia via Suez and the North Sea was cut off. A lot of 12,000,000 Australian rabbits came into Canada and were sold as Canadian fur. Then the Australian rabbits came to the American market in a deluge of millions.

Simultaneously with the coming of the Australian rabbit, American munition men and coke producers and dye manufacturers were perfecting American dyes to oust German control. Fur dyers were brought over from London and France and Leipzig; and American firms began turning out Hudson seals and Alaskan seals and electric

seals fine as any ever turned out in Europe. That being the case — the trade asked — why ship millions of American muskrats undressed to Austria and Germany to be shipped back dressed and manufactured for the American to buy?

Why not dress and manufacture here, and so increase profits all round here from the trapper to the most exclusive retail shop?

But Kamchatka and Siberia have the rarest furs in the world; and they desperately needed American gold during the War years; so their furs also came pouring into American markets via the Pacific. So did Japanese furs, and during the War, there was such a slump in the prices of Canadian furs in London and Paris that they, too, began pouring into the American market.

American fur auctions were not devised by any genius. They were forced by fate.

So great were the profits from direct sales here, there was one deleterious reaction. This country was oozing with newly rich money. Prices jumped 75%; then 100%; just about the time the Texas oil boom began to subside. The gentry, who feed like carrion birds on the corpses of all bones, rushed into the fur game. Many of them had more experience in playing the ponies, or in Seventh Avenue bar rooms, than with furs. Certain that fur prices were going to jump another 100%, they dashed off to the Canadian North-west, to Siberia, to Japan, to Kamchatka, to South America; and they began paying ready money for raw furs out like water. The trapper looked at this new specimen in the fur trade; and he raised the price of muskrat from 50¢ to \$5. Where the pelt was a good one, the buyer got his money back at the fur auction, with perhaps \$1.50 to the good, which is a handsome profit if you have 20,000 good skins. Where the skins were no good, the buyer got about \$4.50 of experience for each pelt; and so did the bank that backed him.

There is not the slightest doubt that the fur auctions of 1920 have driven this class of shoestring operators out of the fur trade for

good. Good skins never brought such high prices, but poor skins brought just as signally low prices.

But besides the sales and the War and the dyes being influences to bring the fur sales back permanently to American centres was another vital reason, which was really the result of the enormous proportions which the trade had attained. During one year white fox has fluctuated as much as from \$6.50 to \$20. We'll suppose 20,000 white fox have come down from Canada to New York billed through to London. Owing to the War, shipment is delayed. Those fox could have been sold in New York for \$20 each, but they remained paying storage in New York. When finally, they reached London, the price was its very worst — lower than the trapper had been paid. There was nothing to do but withdraw those fox from the market and put them in storage till the price went up; and this locked up a profitable turnover of \$400,000. The same story could be told of beaver, of opossum, of silver fox, of muskrat, of kolinsky. European fur company shares suffered a drop that was a thud. Beaver that was \$6.50 in 1917 was \$20 in 1919 in the United States, when the price of beaver was off 75% in London.

The story of opossum in 1915 is a case in point. Six hundred thousand opossum in all were sold. That is a normal supply for two years; but that year cloaks and suits were using opossum trimmings. Opossum that was 35¢ in August in New York was \$1 by September. If the American opossum had been shipped to London for sale the following March, it would have missed the 1915 special trade demand; and by 1916, the trimmings had shifted from opossum to fox and downy lynx and badger effect.

It need not for a moment be thought that Europe is going to let the fur market go to America without a struggle. This year, the prices in London have been uniformly 20 to 50% lower than in America; though just as many buyers were present at the London auctions as at the Montreal and New York auctions. It may have been because Europe is short of money. It may have been because Europe is always a market for a certain class of furs and America

a market for another class of furs. But it also may have been as one of the conservative companies said — “We can afford to lose our dividends for a few years to bring the fur markets of the world back to Europe.” Will they ever go back to Europe? Some will. Europe will always be the best market for sea otter, for Australian and Chinese and Japanese furs, for Canadian otter which finds its highest price in Russia, for Persian lamb and broadtail and krimmer and karakul, for Russian sable and marten and the sorts of furs used for summer wear in a damp cool climate; but for general utility and general beauty furs such as fox, Alaska seal, Hudson seal, mink, beaver, nutria, wolf, muskrat, America has captured the fur market to hold it for all time.

CHAPTER III

THINGS EVERY WOMAN, WHO BUYS FURS, SHOULD KNOW

AMERICA is to-day literally fur frenzied.

Newly rich, post-graduate rich and the new poor, impoverished by the High Cost of Living, while professional remuneration has stayed at pre-War levels, — every class and layer of the social world has caught the fad and affects furs.

For three years now, summer furs have been the fashion in every part of America, not only neck pieces but hat trimmings and edgings for elaborate gowns; and the fashion shows not a sign of abating. Those who cannot afford real silver fox, or sable at \$1000 per, buy white fox dyed in imitation of silver fox, or Chinese goat dyed in imitation of no fox that ever was on land or sea — and are happy; and swell the swelling chorus for furs, more furs, and yet more furs.

“Of all the accursed follies of fashion,” declared a great Canadian fur authority to me, “this whim for summer furs is the silliest and the most destructive of wild life. I wish every time you have the chance, you would hit the fashion on the head as you would hit a rattlesnake. If it lasts for ten years, there will not be left a fur-bearing animal in its natural state. Fox and sable and mink will be extinct as the buffalo, to be found only on fur farms and government preserves. Whole tribes of Indians will die out for lack of hunting ground; and the wild game life of America will have passed forever.”

“Extinction of furs! Fiddlesticks!” declared another great fur trader, who has been buyer for one of the largest firms in the world

for twenty years. "Summer furs are only a fad in America and can never last. In certain fashion centres of Europe, they are necessary, because the houses have no furnaces and are mostly brick and stone and owing to close proximity to the sea are chill and damp. During the War, tens of thousands of our people went across and saw fashionable European women beautifully gowned in becoming furs; and they came back to America and called for the same fashions here. Besides furs are the most becoming frame any human face — old or young — can wear. There is a fur for every face. There is a fur for every color of complexion and hair. There is no face they do not improve and soften. They set out the color of a young face and they soften the harshness of an old face. They give that film of beauty to a face, which an artist knows how to impart to a portrait. Why was Gainsborough the pet of society as an artist? Because he made the portrait of every sitter a beauty.

"It is the same with furs. They impart the most insidious flattery to every human face. But there is a point of saturation even to flattery, where it loses its potency from being applied too strongly. We are reaching that point in furs. No matter how much an artist flatters in a portrait, no woman has her portrait painted by the same artist more than once. A woman buys a good fur coat; but she doesn't buy it every year. The same with a sable or chinchilla neck piece. She gets one; but she doesn't get two. Now Americans have had a lot of money during these War years. A lot of people have had a lot of money, who never had money to spend before; and they have been spending it; but they can't spend the same money twice; and we as fur merchants don't look to see the mad demand for furs keep up to its present level.

"Besides fashion changes every year. One year the whim is mink and kolinsky. The next year, it is fox, silver fox, cross fox, every kind of fox and imitation of fox. We are in the midst of the fox craze now. Or else the dyeing of muskrat in imitation of Alaska seal becomes so fine that our own fur dressers on a bet of an Alaska seal coat if they were right could not distinguish the 'Hudson seal'

or muskrat, from the Alaska seal; and muskrat pelts jump in price from 12 and 50 cents to \$4 and \$5.

"Then comes a whim of fashion. Mrs. B———doesn't want a Hudson seal coat because her social rival Mrs. C———has one; or some of the other reasonless whims. Then a lot of shoestring buyers, who don't know anything more about the fine qualities and highly technical points of furs than they did, when they rushed into gold brick mining in worthless gold shares, or oil wildcatting in wells that never pumped a barrel of oil — get stung, get badly stung; and quit buying at crazy prices. When gold-briquetting and watered oil failed these gentry, they jumped into furs and rushed off to the wilds of Canada and Siberia and Kamchatka, and because a fur like muskrat or kolinsky had been high in New York when they jumped into the game, they paid the wildest prices to the native fur trapper in his native haunt — were going to 'bust the old companies' and all that, you know. Well, they paid \$5 for muskrat for which the old fur dealers — wise old wolves — would only pay 50 cents.

"But here's the stumbling point to such tenderfeet in the fur game. Your man new to the game buys, we'll say in the winter of 1919. It is spring of 1920 before he can get the furs so bought out to market; and it is the fall of 1920 before those furs are dressed, dyed and made up for the retail market. By that time, fashion has shifted from muskrat and seals to foxes and sables. Every man buying those furs on a gamble is stung; and the next season won't touch muskrat with tongs. The Indians are quick to feel the reaction; and don't trap muskrat so hard. The fur trade lets up on muskrat; and the muskrat have a chance to multiply.

"Now the old established companies play the game in another way — play a longer suit if you like to put it that way. The minute they discover the fashion has changed for a certain fur, they discourage the trappers from going after that fur. They lower prices; and if they are caught with a big supply of a certain fur, when the fashion has changed, they put them in cold storage and

don't glut the market and don't buy any more of that fur. The slowing up is felt all down the line from my lady on Fifth Avenue, or Hyde Park, London, to a lonely Indian on Hudson Bay. I, myself, was once caught with 100,000 beautiful muskrats for which I had paid 50 to 90 cents. I could not sell them for 90 cents and had to hold them for five years and feed them out to the trade gradually. I know instances where fur buyers have been loaded with millions of pounds of rabbit; and 'near seal' took a slump, or there was a warm winter, or there were hard times, and those Australian and Belgian rabbits almost ruined the fur buyer, ate his head off in interest charges, just as the live rabbit had become a pest in Australia.

"Of all the world's industries, fur trading is the oldest, the trickiest, the most technical, subject to the most shifts of whim and finance. It is a game for wise old wolves, not new tenderfeet and fly-by-night gamblers.

"Mind I do not say we do not need to conserve furs. We do. We are doing a selling trade — local and foreign — in furs to-day of from 70 million to 100 million dollars, where we were doing a fur trade of only 17 to 20 millions before the War. With fox skins selling all the way from \$200 for cross fox to \$1225 for silver — as they did the other day in Montreal — where they used to sell for from \$15 down to \$5 or up to \$200, women who buy furs should exercise the same care and discrimination and judgment and knowledge as a connoisseur of rarest jewels. Furs are going to be just as much a mark of good taste as jewels or objects of art. Like jewels, you do not buy them for one season, but for a life time, and if you take proper care of them, you could buy them for two or three generations of wearers.

"Get this point clear—reputable fur dealers have no more desire to sail under false colors than reputable jewellers. When furs are dyed imitations of rare furs, the reputable dealer tells the customer so. Hudson seal is dyed, especially treated very fine muskrat. Near seal is dyed, especially treated coney and rabbit. Black sable is lustrous skunk. Fisher defies imitation but is often mistaken by

the buyer for fine black fox; but that is the buyer's fault, not the dealer's.

"There are just certain things that every woman, who buys furs, should know, which the dealer wants her to know; and when she knows those things she will love furs as much as jewels, and take such care of them she will be as great a conserver of wild life as the most ardent lover of game."

What, then, are the things, that every woman, who buys furs, should know?

First, what does she want them for?

To improve her apparel, of course, and set off her natural style or charm; but is she to wear the fur as a light neck piece with an evening gown, or as a throat protection collar on the street, or as a hard wearing utility garment? There are furs for every face and furs for every purpose; but naturally for rough wear motoring, or in wet storms, you would not choose the same fur as for the wrap round bare neck in evening gown going from one heated room to another. You can choose the same color but you would not choose the same pelt. For instance, in soft grays, opossum or gray krimmer give you a rough, durable fur in gray suitable for coarse usage outdoors. Gray squirrel gives you a fragile fur suitable for outdoor or indoor wear, but suitable only for gentle wear and tear. Chinchilla and mole give you a gray fine in sheen as dew in sunlight suitable only for elaborate evening wear with the greatest care and no wear and tear. Opossum and krimmer are cheap. Gray squirrel is dear and fragile and impossible of imitation or dye. Chinchilla and mole may be dyed, that is, tipped by hand where the edged seams meet, but no art of man can imitate or reproduce both the lustre and pansy softness of these almost velvet furs.

Chinchilla is costly. One can understand why. It has become so scarce three-quarters of South American countries from which it comes have declared a closed season for five or six years; so that chinchilla has almost disappeared even as edging for hats, or evening gowns; but why should mole be so dear? Mole are not scarce and

never can be scarce. They hide in the earth and multiply almost as prolific as rats, and come to the market in millions. Why is a moleskin wrap costly as a tiara of jewels, or a good moleskin neck piece in the same class as the necklace it conceals?

Consider for a moment! The little mole burrow has been turned up by a boy plowing. He succeeds in killing and skinning the mole, pickling the skin and sending it in good condition to the fur buyer. It now has to be fleshed and cleaned — that is, tiny particles of fat or flesh adhering to the inside of the skin must be scraped off. The mole skin is fragile as oiled paper, especially at this stage, when it has not been softened; and whether the fleshing be done by hand with the smoothest and bluntest of bone scrapers such as the Indians use, or a knife such as professional skin dressers use, one false strike, one careless look away from the job may ruin a skin.

This is all hand work and it takes 400 to 600 skins to make a lady's evening wrap. The skin is next cleaned — a process that will be described further on. The skin side must now be dipped to dye the edges where the seams meet; otherwise a raw pelt would show up at each of the 1600 seams in the coat. They call this "topping." Now each mole skin must be cut even at the edges to be sewed into squares — another 1600 hand operations. The sewing comes — another 1600 hand operations. The hand operations now total, 400 skinnings and picklings, 400 fleshings, 1600 tippings with dye, 1600 cuttings of the edges, 1600 seams sewed, — in all 5600 hand operations. No lapidarist polishing lapis lazuli could do more. But the dresser has not finished with his mole skins yet. They must be dampened and fitted to curved models to give the skin a circular shape for the human figure — all this before the manufacturer has yet touched it for a coat.

One sometimes sees a jeweller caress jewels almost lovingly. Could the fair wearer of furs know what they have cost in human effort, she would caress them just as lovingly and keep them just as carefully, if not in a glass case then in cedar boxes, or cold storage, moth proof, heat proof and damp proof.

It is quite obvious that any woman, who wears the rare furs — mole, chinchilla, gray squirrel — for rough outdoors usage simply shows her own ignorance of furs. It is like the shipyard worker in war-wage days, who ordered an \$1100 Circassian cased baby grand piano placed in his wife's kitchen in a tenement so she could try out tunes while frying sausages.

The first question is — what is the fur wanted for? And that brings up the question of durability. Furs are sorted, standardized and classified in grades just as finely for durability as lumber is in building, or wheat is graded for flour; and when a woman is paying from \$200 up to \$1000 for a fur garment, she should know these standards and grades just as carefully as a man knows his job when he buys lumber or grain.

Before going into the durability of furs, you must understand exactly what fur is. There are three parts to all fur.

There is the skin, the same as a man's skin, next to the flesh.

Then, there is the pelage, thick as wool on some animals like the Persian lambs, or beaver, or nutria, or otter, or seals, or muskrats, or rabbits.

Then there are the rough long upper hairs, whiskers you can call them if you like, which are always plucked from the seals and beavers and nutrias, which are cut down even on the muskrats and otters, and are never cut but are regarded as the chief beauty of the foxes and fishers and sables and martens and skunks.

Now get these next points clear!

There is only one way to tell a dyed from an undyed fur, an imitation from a true fur — only one way, which will not fool a fur trader wise as a wolf, himself; and that is the color of the under skin. The natural color of the under skin is flesh white, not golden, nor yellow. Every other test will defy the finest detection. Cases are on record where men forty years in the business were fooled when offered the present of a coat for their wives if they could tell the difference between Alaska seal, which has to be dyed, and Hudson seal, or muskrat, which also has to be dyed. Here the infallible

test was lacking, because both skins showed up golden; and the white test failed, and the fur dresser chose a \$300 muskrat coat for his wife, when he might have had a \$2000 Alaska seal.

Now granted a woman buyer knows the difference between a dyed skin and an undyed skin. That won't help her as between the Alaska seal and the Hudson seal, in the case of Persian lamb, which is born jet black in pelage but has to be given a brush coat of black for lustre. Well-dyed skins will never suffer from the dye; but skins beautifully dyed may have too much acid in the dye, which will in the course of five or six years eat through the pelage of fur into the hide and weaken it. How is a buyer to know a well-dyed skin from a poorly-dyed skin, granted both have equally fine lustre? This is an important question when you are buying a coat valued at from \$1000 to \$12,000. If you bought a horse of that value, you would have a connoisseur look him over. The dealer's test is this. Gently stretch the dyed skin. If it stretches soft as the skin on the back of your hand, it is well dyed. If it cracks, or emits a little feel like a seam about to rip, look out! It has been fleshed thin, or hardened in the dyeing and will rip. Just now it is reënforced by rubber, or padding, or false skin; but some day when you are in a hurry and jerk your arm, there will be a rip and seam will show; and it will not be the fault of your tailor. It will be away back in the curing and dyeing of the skin.

As to durability, it hardly needs to be told that an undyed skin will always be more durable than a dyed skin, and the skin of a strong tough animal like bear, or wolf, or fisher, or otter, or buffalo, more durable than a fragile animal like fox, or muskrat, or mole, or squirrel, or chinchilla.

Next to skin in durability, consider the pelage, or thick fur proper. Fur that has glossy lustre and is really a fur as distinct from wool is more durable than fur that has the feel of wool or down; so you get otter and skunk and fisher and wolf and coon and bear as more durable than either Alaska or Hudson seal, or beaver or nutria, or fox, or sable, or mink, or marten. The lustre furs do not mat and



Hudson Seal with Skunk and Bear Trimmings.



Courtesy Gottlieb Company.

Real and Imitation Silver Fox—Note the Dimpled Strip Down Centre
Back of True Silver: Compare the Dyed Silver

soil in rain and fog and raw sea weather. They do not fade. This is one of the great faults of beaver, which is one of the toughest and most durable of furs. It fades in strong sunlight and mats in damp. It probably does so because the beaver originally lived in shade, and the outer coarse fur which has been plucked protected the under pelage in his aquatic life and habits. This also applies to the best muskrats, whether sold as Hudson seal or imitation mink.

In durability, then, as to fur proper, the unplucked fur is far more durable than the plucked fur. This places unplucked otter at the head of all furs as the most durable pelt. Plucked otter is sold dyed for Alaska seal, or for beaver and nutria. It is usually the rubbed belly of the animal, or a skin taken out of season and not prime and so cannot be sold as unplucked otter.

Next comes the durability of the furs with the long upper hairs. From the beavers and the seals, they are plucked. On the muskrats and rabbits and otters, they are evened down; but in the foxes and the fishers and the skunks and the martens and the sables and the mink, they are left as the chief beauty. It is the long upper hair that gives to sables the almost purplish vapory sheen; and to mink, the appearance of almost a veil; and to skunk and fisher almost a velvet softness, and to fox its chief beauty. It is the long hair of the fox frames the face in a soft aureole and takes out the harsh lines. It is the long hair has the tip of silver in the fox. Fox would not be fox without the long hair; but with the two exceptions of fisher and skunk, long-haired furs are not durable. The long hairs scuff at the neck and show wear first. If it is an expensive fur like sable, marten, silver fox, mink, the scuffed fur should yearly be taken to the fur dealer to be redressed, just as a lover of jewels takes her diamonds and pearls once a year to the jewellers to have them cleaned.

Just here let it be said that fisher is the only long-haired fur that cannot be dyed into an imitation of something else. That is why it has gone up in price from \$10 and \$15 a pelt to \$148 and \$345 as they sold in Montreal and New York and St. Louis the other day at

the great fur auction. Fisher is never made up into other furs. It is used by itself as a one piece skin for the neck, or fur muffs; and the depth of its long hairs and pelage is such, a woman can bury her hands or her face in them. It is the most durable of all the long-haired furs; and it is always high priced and holds its own on the market, where mink in twenty years has fluctuated all the way from 90 cents, at which I have been offered good mink in the Rockies, to \$19 and \$25 a skin, at which it recently sold. Fisher to-day ranks in the same class as Russian sable. The highest Russian sable in the auction of 1920 brought \$790, the lowest \$145; the highest fisher \$345, the lowest \$29; the highest silver fox \$1225, the lowest \$1.50 for a spoiled pelt.

In point of durability, the fur traders universally accept this table which was prepared by Marcus Petersen; and it should be as carefully studied by every woman buying furs as a stock broker studies the basic resources of the stock he buys outright. We buy furs for keeps, not to sell. Here is how they keep for everyday wear.

Taking the otter at 100 as the standard, the relative durability of some of the best known furs is shown in the following table:

Otter — Natural	100	Sable — Natural	60
Wolverine	100	Wolf — Natural	50
Otter — Plucked	95	Skunk — Tipped	50
Bear — Black or Brown	94	Raccoon — Dyed	50
Beaver — Natural	90	Marten — Baum — Blended	45
Beaver — Plucked	85	Marten — Stone	45
Seal — (Hair)	80	Sable — Blended	45
Seal — (Fur)	80	Muskrat — Natural	45
Seal — (Hair) Dyed	75	Opossum — Australian	40
Leopard	75	Civet Cat	40
Seal — (Fur, Dyed)	70	Fox — Natural	40
Mink — Natural	70	Opossum — Natural	37
Skunk — Natural	70	Pony — Russian	35
Marten — Baum	65	Mink — Dyed	35
Persian	65	Marten — Stone — Dyed	35
Raccoon — Natural	65	Muskrat — Seal	33
Krimmer	60	Wolf — Dyed	30

Ermine	25	Mink — Japan	20
Fox — Dyed Black	25	Squirrel — Black — Blended	20
Kolinsky	25	Opossum — Dyed	20
Lynx	25	Chinchilla	15
Squirrel — Black	25	Goat	15
Nutria — Plucked	25	Astrachan — Moiré	10
Coney	20	Mole	7
Fox — Blue	20	Hare	5
Marmot — Dyed	20	Rabbit	5

This does not mean that if you take as good care of chinchilla as of diamonds, it won't last you a lifetime. It will; but you will have to give it care. Seal is placed high; but seal fades. Beaver is placed high; but beaver mats. Mink and marten and sable are placed high; but the long hairs will scuff. A good wolf is better than a poor fox, though it is dyed to imitate fox; for its hide is tough and its pelage thick. A distinction is made between natural mink and dyed mink, natural marten and dyed marten. That does not mean that the dyed mink and marten are false. It simply means that to make a wrap or coat, you have to match colors; and to make the stripes run into each other, you often have to feather in by hand dye to make the stripes blend; and whenever dye is feathered in, sooner or later, it may be ten years, it will eat down to the skin and weaken it. If it were not for this, kolinsky would move right up to the natural mink class; for kolinsky is a relative of the mink; but unfortunately kolinsky is a bright orange yellow color and has to be dyed dark and that reduces its durability 75%.

Another point about kolinsky is that the dye takes away the metallic lustre and gives in its place an almost catty silkiness, not the velvet of chinchilla and squirrel and mole. Nevertheless for general utility, if I took good care of it, I would choose a kolinsky up next to otter, or beaver; and I was brought up in a fur country that abhors dyed furs.

Speaking of cats, which are sold to the trade as genet — and are being sold so plentifully by the trade just now that stray cats no

longer exist and birds are multiplying — the skin of the cat is much more durable than rabbit, but it can never be completely deodorized. Skunk can be deodorized and sold as black sable. Cat can't be sold as Hudson seal or near seal. Dampen it a little. Bury your nose in it and you get "cat." Such fine Belgian cats were recently sold at one fur auction that they fooled a Hudson Bay man, who has been dealing in fisher for twenty years; but he smelt right down in the fur; and there was his good old friend of boyhood days, who made night hideous in the backyard.

Having settled in her own mind as to durability and fragility and beauty, there are a lot of other things a woman, who is going to outfit herself in furs, wants to know.

She is going to pay a high price for a silver fox, for a neck piece, which she may wear on the street, or over her shoulders for an evening gown. How is she to know it is a genuine silver fox, and not cross fox dyed, or Arctic fox dyed, or a very fine red fox dyed with badger hairs glued in for silver?

The best way for her to know is to go to a reputable fur dealer and he will tell her exactly how to know. He will place an imitation and a real side by side; and she will know at a glance; but lacking faith in the honesty of even a reputable dealer, here are some infallible guides:

The dyed fox has a golden skin. The undyed fox has a white skin.

The dyed fox has to have a white tip attached to his tail. Feel where the cord joins on, or examine to see if white hairs are glued on.

But a more puzzling question is of a cheaper grade silver fox skin, where the young fox has rubbed his rump on trees and thinned the thigh furs. The fur dresser has glued in white and gray badger hairs to replace the young silver fox's thin spots. This does not spoil the general effect of the silky neck piece with its strip of lustrous black down the back like the dimple on a fat horse; but it should lessen the price of the silver fox to the buyer. Every buyer of a silver fox skin should examine the thighs for these signs of wear.

Speaking of badger, it is a beautiful, downy, deep, gray mottled fur most becoming to young girls and very reasonable in price. The fact it is used to imitate silver fox gives a key to its beauty. In a cold dry climate like the Manitoba climate, it is durable. In a damp climate like New York, it would mat and lose its lustre and soon look like weathered wool.

"Pointed fox" is cross fox with the white hairs glued in by hand. It need hardly be added glue is not durable, though it can be cheaply repaired.

"Iceland fox" is nothing but Chinese sheep or goat, combed, electrified and bleached. It is warm but sheds and dulls. Also it is very cheap.

Muskrat is the most durable imitation fur. The thing to look out for is the creaking or cracking of the dye, "the stay" of the pelt. The reason so many muskrat linings pull to pieces is the pelt has been thinned too closely, or cured too harshly. It cracks.

Ermine used to be a rare high-priced, almost priceless fur; for with the black spots over it, it was the miniver of royalty; but for some years, ermine has gone out of style. It is a very warm fur for children or for evening wraps; but it is easily soiled; and should never be bought on the same price basis as chinchilla, mole, squirrel, mink, sable or marten. Neither the pelt nor the fur are worth it. When you pay such prices, you are paying for a whim, and not for real values. And ermine is not becoming to all skins. Look at it on a saffron face.

When buying kolinsky, look out for seam rips from dye.

When wolf is sold as fox, the coarse back has been cut out. Feel for the outline of the fox shape and size.

Lynx is a soft, delicate, fluffy fur; but no fluffy fur will stand hard usage and not lose its fluff.

When buying mink, be sure not only that it is mink, but that it has been trapped in season, in December and January, when the fur has a lustre. Otherwise, your mink may have to be dyed to match stripes and that will weaken the skin below.

Of skunk, there are two kinds in the fur world — the black with his tail in the air, his poor relative the little civet striped skunk. The former has the tougher skin and the deeper fur. The latter should never be a high-priced skin.

The best beaver is golden brown with the lustre of the sun. Other beaver may have been trapped out of season, unprime furs always shed hairs and wear into thin spots.

“Coon” skin is tough and most durable, defying sun or rain; but to be beautiful the stripes must match perfectly and be dark. Beware of dyed stripes.

The best dog skin comes from China and Russia and is very durable.

Coney is nothing but rabbit. You usually get it as near seal, or French seal. It lacks the lustre — also the gold brown of Hudson seal, which is muskrat.

Twenty years ago, American trade absorbed only 100,000 muskrats a year. To-day it absorbs 4,000,000 to 7,000,000. The best skins go into Hudson seals. Others go to imitate kolinsky as linings. The waste of muskrat goes into felt and hats. The muskrat pelt is square. The kolinsky is oblong. Feel the shape of the pelt sewed in your coat. Muskrat is very durable. It is nearly always a good buy if you know you are buying muskrat and not kolinsky. Its price has gone up from 12 cents to \$5 in ten years.

The best furs come from the coldest climate, from fresh water in preference to salt, and from shaded woods in preference to open plains. Choose accordingly; remembering there are no opossums, chinchillas, nutrias in a cold climate, and no beavers worth taking from a warm climate. There are no tigers from the far North; but the best tigers come from the shaded jungle.

As a rule, dehaired furs do not need chemicals and therefore are more durable. This applies to beavers, nutrias, otters.

When beaver and otter have been slightly silvered, they are more beautiful than golden brown; but the silvering has been done by chemicals and may weather in a way the natural fur will not. The

chemicals may also eat down to the skin and in course of ten years, weaken it. The most beautiful collection of otter I have ever seen came from an assorted lot of Labrador and Kamchatka skins. Except for their size, at a glance and at a distance they might be mistaken for dark marten lacking the stripe; but they had been silvered by chemicals and I did not order a coat made from them, which would have cost me almost as much as mink or marten, because I know a coat costing so much should last a lifetime; and in a few years, silvered otter would not look as well as the lustrous gold brown, which retains its complexion for twenty years unimpaired if you don't expose it to heat.

Vegetable dyes do not injure a skin as much as chemical dyes. Therefore a skin well cured by Indians will last the longest.

While wolf is counterfeited for fox, it is a tougher skin than fox and worth the value of a fox if bought at the price of red fox, or cross fox. Wolf is never the value of silver or black fox.

Smell Russian sable if you want to know if some stripes have been hand dyed by a feather. A process of smoke fumes is sometimes used to give the vapory gleam to the fur. It does not injure the pelt but leaves a slight odor of fumes.

The fisher can never be faked. He is large and he is a one piece fur; and his bushy tail is the stamp of his aristocracy among furs.

Having bought your rare furs, the question is how to keep them. Expensive furs should be examined by a reliable furrier every year or two for signs of deterioration, the same as your teeth or jewels. The scuff in fox next to the wearer's neck should be repaired every year. Otherwise, it gives a shabby appearance to what is just as good as new. This particularly applies to cross fox, which comes next to silver fox in value. Furs like nutria and beaver, which mat, can be kept as lustrous as new if you avoid exposure to damp weather and have them whipped and combed and sawdust cleaned at intervals as you would have a fine evening gown especially freshened up. Seals real and imitation and all lambs should be watched for the acid eating down to the skin, which can be reënforced by a false skin

to prevent rips and tears. The deep fluffy, costly furs like sable and marten and mink must be kept absolutely moth proof in cedar chest, or rolled in tar paper with moth balls, or best of all, stored insured in cold storage rooms, where the temperature will prevent the deposit or breeding of moths' eggs.

If such care is taken of furs by the fur wearer, there will be no quarrel between the fur buyer and the lover of wild life; for furs so kept will soon bring each fur to its point of "saturation" so that for a season the muskrat will not call for it and the fur animals will replenish themselves. Also high-priced furs bought with the discrimination of a connoisseur in jewels or pictures will forever rule off the market furs taken when they are not prime; for furs taken when they are not prime shed hairs and rip when fleshed and have to be chemically treated before they can be marketed. In all the States of the Union and in all the Provinces of Canada to-day furs taken when not prime are confiscated and the trappers heavily fined. Good hunters spare the mothers and take only the ravenous young males, whose cruel depredations among themselves perpetrate more deaths than man has ever invented. You have to know only the habits of the wolf with its mate, or the wolverine, or the mink, or the ermine, or the Alaska seal, when the young males fight for their mates and destroy the pups — to realize that fur trading pursued scientifically as the big companies pursue it purely to conserve their own resources — is infinitely more merciful than nature's law of claw and tooth red in blood.

The guilty rascal in the fur trade is the irresponsible gambler, who has been playing Nevada gold or Texas oil, and seeing the advance in the price of furs rushes into the fur game offering such prices that irresponsible hunters go out to kill to the point of extermination. These gentry ignorant of game life kill prime and unprime, young and old, male and female; but when the unprime comes to market, if the skins are rejected by buyers, who purchase with the care that they would an art object or a jewel, "these gentry" are stung, and poachers, who are gamblers, are driven out of the fur trade.

That is exactly what has happened in the sales of 1920. Good furs never sold so high. Poor furs never sold so low; and many a foolish buyer had to buy in his own poor offerings. Such traders are out of the game. The banks will extend them no more credit; and every woman, who loves furs and wild life, has the remedy in her own hands. Let her buy her furs with the fine taste and care she would buy a diamond necklace, or an oil painting. A woman is known not by the jewels she wears but by the hands inside the jewels. So she is stamped by her furs. Not by the cost but by their suitability; and a woman, who wears \$30,000 worth of pelts on her carcass, proclaims herself as great a game hog as the drunken sot who goes out and slays a mother fox with her unborn young.

A friend of mine went into one of the most exclusive shops of New York not long ago. She was shown two fur coats; one for \$3000, another for over \$30,000. The first was for one of the greatest women philanthropists in America, who was buying it for life-long wear as she would buy a summer camp. The other was for a newspaper head liner, who had come up from the gutter via the dance hall and forgotten the marriage ceremony in her climb. In each case, the furs proclaimed the woman.

CHAPTER IV

FALSE FURS AND FAKE TRADE NAMES

It is a mistake to regard misleading trade names as a proof of the perverse dishonesty of the furrier. With the coming of the great fur markets to the United States and Canada has also come a concerted movement to eliminate misleading trade names and to grade furs to such fixed standards that any buyer who takes the trouble can know exactly what value he is getting for his money.

The misleading trade names arose in the first place from the ignorance of the small furrier and of the retail merchant of the real character of his own wares. Two examples have been given of this — the fur dresser, who on a bet failed to distinguish Alaska seal from Hudson seal, which is muskrat; and the Northern trader, who failed to tell a first class Belgian tom cat from fisher. If experts failed to distinguish true from false, how could the small retailer be expected to know? Especially, how could a salesman, who had never seen a wild fur-bearing animal in his life, be expected to know? And with a buyer, who did not know goat from wolf, and a seller, who got a premium for pushing up his total of sales each day, false furs and fake trade names got their strangle-hold on the market.

The second cause of misleading trade names was directly the fault of the public. There was a day — we all remember it — when coon skin was the official badge of "the cabby," or the liveried winter coachman. These were cheap, ragged-looking "coon," re-tailing at \$25 to \$45 a coat, cap and gauntlets to match; but that quality of coon destroyed the value of good coon on the market. What matter if a coachman's coon were an unprime, faded, dirty yellow striped fur, and good prime coon were a fur glossy and silky as

silver fox and beautifully striped with black and brown as the backbone mark of some silver fox, or the natural stripes of marten. The public did not look twice and would not have coon under its true name; so coon came on the market as a seller as "Alaska bear" and "silver bear" — and sold at three times the price to buyers, who were greedy for its beauty.

Then there was the time immemorial prejudice against skunk. There was also the fact that up to very recent years, skunk was not completely deodorized. Get caught in a rain and then come into a hot atmosphere like a crowded church, and the odor of a skunk with his flag up filled the air. Skunk as skunk simply wouldn't sell; so skunk became "Alaska sable," or "black sable" — though "a rose by any other name smells as sweet" — and the salesman could conscientiously assure you it would wear better than Russian sable and had a stronger, tougher pelt as well as deeper pelage. It was no time till under the new name, good skunk was selling high as indifferent sable.

Then it is only within the last few years that the perfecting of the dyeing of muskrat has produced an effect as beautiful as Alaska seal and much more durable. The most of people remember muskrat as "rat" with a long stringy tail and fur that dulled and faded and shed hairs as it grew older. That muskrat plucked or evened of its long over-hairs would neither shed, nor fade — the public did not know. Rat was rat worth about 10¢ a skin; and the public would not pay \$200 and \$300 for a first class coat called "rat," where they would pay \$300 to \$400 for a coat called "Hudson seal."

Then, do you think any ambitious girl was going to pay \$20 to \$35 for a neck piece called "tom cat"? Not she! Tom cat to her was worth about the 50¢ she would pay some villager to shoot an obnoxious bird killer; but "genet" — that was different. It might be some kind of sable, or strange beast a relative of the sable. Anyway, other people didn't know what "genet" was; so she paid \$20 to \$35 for it.

As for ermine, with black dots all over it, it was the miniver in

which royalty was crowned. It was also a favorite evening opera cloak for the wealthy, or neck piece for light summer wear and evening dress; so why inquire too closely whether ermine were rabbit or cat with black dots stuck on? The badge of true ermine was the sulphur shade, not the black tail tip; but that could be fixed up with a paint brush; so why inquire too closely when the values were so fabulously different, that only the rich could afford one skin, and only the poor the other?

Everybody couldn't afford silver fox, but everybody could afford "Baltic fox," which was rabbit and was just as warm.

Don't curse high heaven for the innate dishonesty of mankind! Rabbit are so prolific they are a pest. They can never be depleted used as fur; and every rabbit pelt so used saves the use of some rarer skin.

Americans have been trapping skunk now for over 300 years, and from odors that greet motors flying over country roads, the skunk is still with us going strong. He is, indeed, about the only kind of road arrester, who can punish a speed devil adequately; so don't judge the little skunk sporting the cognomen of an aristocratic relative as "black marten." Just remember there is no such thing as "black marten," any more than there is such a fur as "black sable." Sables and martens alike have a ground pelage of exceedingly dark browns and golds. The skunk's pelage is black.

There was a day when you could buy the best Northern mink — deep over-hair, fine golden brown under-hair — at 90¢ each round Banff, Canada, when the Stoney Indians brought their hunt from Kootenay. The same skins to-day sell high as \$19 to \$30; and the muskrat, which is tougher, better-wearing pelt, can be bought from \$4 to \$5; so why grudge the little muskrat dyed to imitate mink? No grudge at all, except that a false name is a cheat and ultimately reacts to hurt the value of the true fur. The muskrat is square in shape. The mink is long and snaky in shape; and their shapes are really very good indexes to their characters; so better give each its true name and character.

Fifteen years ago, beaver was very scarce and very high-priced because a closed season was on in beaver for many Canadian provinces. To-day beaver is not so scarce, nor comparatively so high in price. But when beaver was scarce, nutria from South America was not; and good nutria was often faked in fur trimmings for beaver. It could not be faked in a coat. The difference in the fur is too great; but it could be faked for hat trimmings, neck and sleeve pieces and edgings for velvet gowns. In coats, the difference is easily told. Beaver is gold brown, or gray brown with a silvery cast. Nutria is sepia color. Beaver is a large animal. Nutria is small as a muskrat. Beaver is a deep thick fur. Nutria is a thick fur, but not deep. Just now the faking of beaver by nutria is not in vogue; for nutria is growing scarce and beaver more plentiful.

Many people will not wear dog fur, who have no objection to wolf, though the dog and the wolf are brothers; so black dog is sold for wolf. I can tell the difference myself, though it would be very hard for me to tell others how to tell the difference. The nearest parallel I can give it — if you neglect a dog and allow him to run wild in cold weather, keeping him out day and night, his fur will lose its sleekness and take on a coarseness and thickness. It will be less even. The over-hairs will be long and irregular and deep. The pelt will not be tight. But for trade purposes, the trouble is a cutting machine used as an evener and a paint brush to give lustre in the dyes can render these skins almost a counterfeit of each other — almost but not quite — the wolf will still be deeper, fluffier, the dog tighter like a lamb skin pelt; but why not sell them under their true names?

The distinction between dyed opossum and dyed skunk hardly needs to be given. Opossum has a kink to it and is a soft fur. Skunk has hairs straight as a line in Euclid and is a harsh, thick, deep fur.

Only the back of the lynx is used for high-priced trade purposes. The fur is so soft that the sides and belly rub. They are cut and

used for linings, edgings, trimmings, feltings. I confess I can see no reason for even trying to fake lynx. It is an expensive and a beautiful fur, but a very fragile fur. Still when you see lynx advertised cheap under any qualifying name, except pure lynx, such as "Baltic lynx" or "Asiatic lynx," etc., look out. You are buying rabbit.

Wolf for fox is a better wearing fur; but why lie about it?

Why not each to its true name?

A good kolinsky is really a relative of the sable; but because kolinsky is naturally orange, it must be dyed, and being dyed can never be durable as an undyed fur, therefore it should never be sold at even an approach to sable prices. As a matter of fact, it is never sold at an approach to sable prices. Then why call it "a Japanese sable"? Kolinsky price is not helped and sable price is slightly adulterated.

There is a point about mole. It is subject to tiny bald spots. These are not signs of a bad skin, any more than pores in a piece of good cloisonné, or crackles in Satsuma china. Small bald spots are as common to the mole's skin as warts to the human skin. Too many deteriorate the value but do not affect the durability of the skin.

Hudson seal — muskrat — and Alaska seal, both being dyed, how tell them apart? Muskrat is small in size — seal is large. That is the only difference I can give, as dyeing and dressing have perfected both pelts.

A great many people would scorn to wear a sheep skin, but they will eagerly wear an "Iceland fox," which is nothing more or less than a Chinese sheep skin combed, electrified and bleached, with this difference — the sheep hide is tougher than the fox hide, but the sheep hairs will in a few seasons shed. I can see for the life of me no evil in this fur faked as white fox for use by children. A child will not take care of furs. "The Iceland fox" is cheap and warm and very beautiful round a little child face. China sends out ten million such sheep and goat skins a year.

"Pointed fox," the fake for "silver fox," is a very expensive fur and almost as good as its prototype; but the white hairs are the badger put on by hand; and when the badger hairs begin to come out and the silver fox to show wear, the buyer is apt to blame silver fox and to hunt the market for true silver fox; so here, true names should be enforced.

Coney is rabbit. Near seal is rabbit. Electric seal is rabbit; and no rabbit will ever wear like seal; and the sooner this name is given its honest brand the better. In a few years, when Alaska seal have multiplied to the point of being within reach of buyers of moderate means, the real Alaska seal will be on the market again in volume; and to have half a dozen varieties of seal on the market will only hurt the true seal.

Chinchilla has become so scarce a fur that the most of South American countries from which it comes have put on a closed season for several years; so look out for a chinchilla on the market to-day being nothing more or less than a faked rabbit, which is a very mean fake, indeed, for it will both shed and wear.

Two or three absolute cheats for which there is no excuse whatever and should be subject to arrest for misrepresentation are:

(1) Coon plucked, dyed and sold for beaver, which is preëminently the undyed and undyeable fur.

(2) Marmot, or mountain ground squirrel, which has a tough hide but a fur that always sheds, dyed in stripes for mink.

(3) Muskrat dyed in stripes for mink.

As long as the world markets for furs were in London, Germany and Russia, the responsibility rested squarely on the dyers and dressers in those centres; but now that the world market for furs has come to three centres in America — centres especially for American and Canadian furs — honest names over honest goods and a trade standardized fine as wheat or cotton must be the rule.

And this is the universal desire of the trade, from the great auction corporations like Funstons of St. Louis to the great traders like the Hudson's Bay or Revillon Frères, and the great dyers like

Chappal, and such retailers as those on Fifth Avenue, New York, whose names are a household word synonymous with honor.

Back as early as 1887, the London Chamber of Commerce gave notice that misnaming furs would be liable to prosecution. The names ruled as non-permissible were :

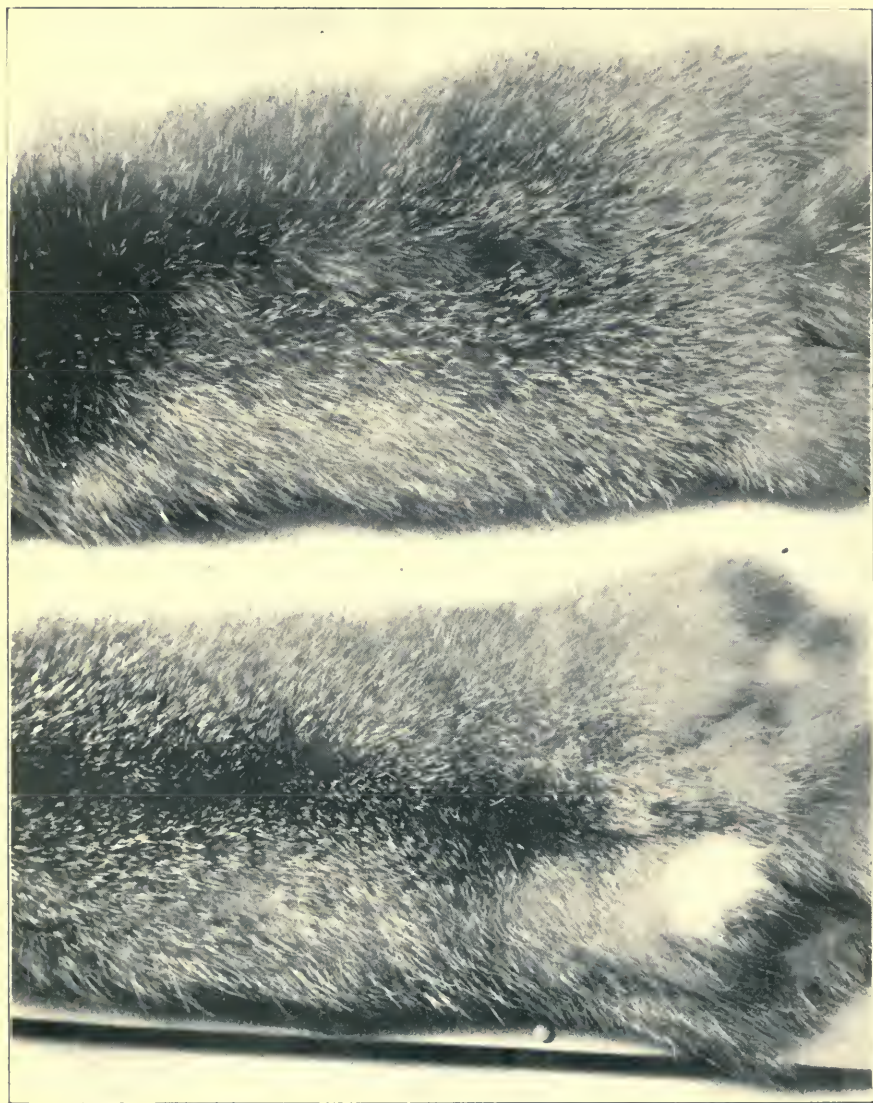
Muskrat or musquash, pulled and dyed	Seal
Nutria, pulled and dyed	Seal
Nutria, pulled and natural	Beaver
Rabbit, sheared and dyed	Seal
Otter, pulled and dyed	Seal
Marmot, dyed	Mink or sable
Fitch, dyed	Sable
Rabbit, dyed	Sable or French sable
Hare, dyed	Sable, fox or lynx
Muskrat, dyed	Mink or sable
Wallaby, dyed	Skunk
White rabbit	Ermine
White rabbit, dyed	Chinchilla
White hare, dyed or natural	Fox, foxaline
Goat, dyed	Bear or leopard

The Canadian Conservation Report recommends that the following names be abolished :

<i>Variety</i>	<i>Sold as</i>
American	Real Russian sable
Fitch, dyed	Sable
Goat, dyed	Bear
Hare, dyed	Sable or fox
Kid	Lamb or broadtail
Marmot, dyed	Mink, sable or skunk
Mink, dyed	Sable
Musquash (muskrat), dyed	Mink or sable
Musquash, pulled and dyed	Seal, electric seal, Red River seal or Hudson Bay seal
Nutria, pulled and dyed	Seal, electric seal, Red River seal or Hudson Bay seal
Nutria, pulled, natural	Beaver and otter
Opossum, sheared and dyed	Beaver
Otter, pulled and dyed	Seal



Dyed Red Fox Showing Method of Gluing in the Badger Hairs.



Red Silver Fox.

Imitation Silver Fox.

Two Types of Imitation Silver Fox.

Rabbit, dyed	Sable or French sable
Rabbit, sheared and dyed	Seal, electric seal, Red River seal, Hudson Bay seal, and seal musquash
Rabbit, white	Ermine
Rabbit, white, dyed	Chinchilla
Wallaby, dyed	Skunk
White hare	Fox and other similar names
Dyed furs of all kinds	Natural
White hairs inserted in foxes and sables .	Real or natural furs

The London Chamber of Commerce recommends the following names :

<i>Name of Fur</i>	<i>Permissible Description</i>
American sable	Canadian sable or real sable
Fitch, dyed	Sable fitch
Goat, dyed	Bear goat
Hare, dyed	Sable hare or fox hare
Kids	Karakul kids
Marmot, dyed	Sable marmot or skunk marmot or mink marmot
Mink, dyed	Sable mink
Musquash muskrat, pulled and dyed . .	Seal musquash
Nutria, pulled and dyed	Seal nutria
Nutria, pulled, natural	Beaver nutria or otter nutria
Opossum, sheared and dyed	Beaver opossum
Otter, pulled and dyed	Seal otter
Rabbit, dyed	Sable coney
White hair inserted in fox or sable . . .	Painted fox or sable
Rabbit, sheared and dyed	Seal coney or musquash coney
Rabbit, white	Mock ermine
Rabbit, white, dyed	Chinchilla coney
Wallaby, sheared and dyed	Skunk wallaby
White hare	Imitation fox or mock fox

The trend of the American trade to-day is to abolish all false names and give each fur its true name; and as far as the fur auction and the best retailers are concerned, this is the rule in Canada and the United States.

CHAPTER V

FUR FARMING TO SUPPLY THE WORLD DEMAND FOR FURS — SILVER FOX

FUR farming is the most hopeful and fascinating phase of the fur trade to-day.

You can call it by any name you like; but when human care of a fur-bearing species supplies the world with over three million lamb skin coats a year, transforms a whole province like Prince Edward Island into a silver fox farm, increases the number of buffalo in one park from a few hundred to 5000 in ten years, changes the skunk into a domestic pet though it can change neither the odor nor the stripes, brings back the number of beaver from a rarity to almost a pest, and restores the depleted Alaska Seal Islands to the yearly production of 100,000 pelts a season, equal to the best days of the seal fisheries — fur farming has come to stay. It has also become a mighty important factor in the fur trade.

Ten years ago, the greatest authorities on the fur trade were saying fur farming couldn't be done. To-day, they are asking — will it be overdone like the tulip craze of Europe? If a whole province goes into silver fox farming, won't it be overdone so that prices will slump and the farms lose profit and so be forced out of business? If ten years' government care of Alaska seals has increased the fur output of the rookeries from a few thousands to a hundred thousand — which is the expectation by 1922 — won't seals become as common as muskrats? To which the most obvious answer is, if furs as beautiful as silver fox and Alaska seal

become as common as muskrat, there is no woman buyer who will object.

Lessen the price of the silver fox and Alaska seal, and you will multiply buyers a thousandfold.

However cruel trapping may seem to the tender-hearted city dweller, who knows wild life only from books and not from direct contact, trapping is kindness itself compared to the sufferings and deaths of fur animals in wild life. There is, indeed, hardly such a thing as a natural death in wild life. Mothers and unborn young, weaklings and old — alike fall victims to the ravening tooth and claw of wild life; and hunger is the periodic urge and starvation a recurrent scourge. All these sufferings are eliminated from the lives of the fur-bearing tribes by fur farming. It is well known that in seasons when berries and haws are plentiful, the marten and bear become fat and sleek, and when cold weather comes, their fur takes on a sheen seen only on animals in perfect flesh. Likewise of the fox. An exclusive flesh diet causes intestinal troubles that fever and dull the fur. Mix the flesh diet with eggs and meal and grapes and wild berries, and the fox is in perfect health. Scientific feeding and food in abundance are possible on the fur farm in a way never known to wild life; and the entire tendency is to a quick, painless death because any other kind of death may injure the fur. To those kindly souls, who object to death in any form coming to wild life, it ought not to be necessary to say that death ultimately is inevitable to every animal; and if nature did not eradicate the superfluous male by hunger and scourge and fight, it would be almost an impossibility for the young of any species to survive. It is this drives the caribou thousands of miles to lonely water-girt rocks to bring forth their young. A wolf will not only kill his mate, but disembowel her and eat her young. A mother fox alarmed by danger will slay and eat her young. Scientific abundant feeding to improve the fur and quick painless death not to fever or frighten the animal, become necessary features of fur farming. Weaklings are eliminated. The comfort of the fur-bearing animal is studied

and practised; and when breeding stock are valued at from \$800 a pair to \$30,000, it is a pretty safe certainty, the progeny on a fur farm will receive tenderer care than many a human family.

In fact, the failures of the first two or three attempts at fox farming arose from sheer neglect. On the principle that man must not interfere with nature, the foxes were captured and turned loose on some desert island, where they perished from starvation or disease. The first spectacular successes in fur farming arose from handling the fur bearers just as you would handle priceless thoroughbred cattle, or blue-ribbon-winning race horses — by studying their habits and needs, and stinting them nothing.

While there are at time of writing 36 fox farms in the United States and 29 fur-bearing farms of other kinds, and while there are in Canada at least 1000 fur farms of all kinds — it was on Prince Edward Island that the first great spectacular success of fur farming was made. One fox farm had failed partly on Anticosti and another failed altogether off Labrador, chiefly because the animals had simply been caught and turned loose. Whereas in Prince Edward Island, fox farming followed the same lines you would follow with cattle or sheep.

Naturally, it pays better to farm a fur with a pelt worth from \$500 to \$1000 rather than an animal with a pelt worth \$20 to \$30; so Prince Edward Island was lucky in getting started right.

The question comes up — Is the silver fox a species, or a freak? Is he the result of being caught just at the time when his fur is turning from summer coat to winter coat, from light to dark, or at the age when youth is beginning to mingle white hairs with black? Or is he some mix-up of nature's pigments, which we don't understand?

Only ten years ago, I propounded that question to one of the greatest naturalists of Canada, a man who had been a curator of wild life for twenty years; and he did not know. He could only give an opinion; and he gave it tentatively. A few years later on a long canoe trip with a guide, who had trapped in the North for

twenty years, I asked the same question; and he didn't know. He could only give an opinion; and he gave it doubtfully. Both men gave the same answer in one respect. You found silver fox pups in the litter of cross fox and of black fox and sometimes, but rarely, in the litter of red fox; but these instances didn't tell you whether the silver fox were a species, or a freak, till you could definitely establish the parentage of both the vixen and the jack, back not one generation but two or three.

All these disputes have been cleared up by fox farming. Whatever the silver fox was originally, as the Lord made the first silver fox, whether a variation, or a freak, or a species, what the silver fox can be made we now know. He can be made into a registered thoroughbred of his own kind true to breeding as a thoroughbred Holstein, or Ayrshire, or Guernsey, with only such occasional freak throw-backs to ancestry or mixed blood, as the best Holsteins will sometimes show, when ten generations of blacks and whites will surprise themselves by bringing forth a red Holstein.

Follow the monk, Mendel's laws as to mating sweet peas, mate pure silver fox to a pure silver fox, and don't vary for three generations — above all don't introduce alien blood, whose ancestry you don't know — and true as the clock ticks its rounds, from silver fox you will get only silver foxes after the third generation. The first family may have a cross fox. The second family may have a throw back to a cross fox; but if you mate only silver to silver, silver you will get after the third generation; and you will be entitled to register your third generations as thoroughbreds in the registration book of fox farms.

Registration Book!

How the fur hunters of ten years ago would have scoffed at that! But a lot has happened in the fur world in the last ten years; and fox farms to-day have begun registration books for thoroughbreds. When you consider that fox farming had been condemned as a failure in the '80's, and re-condemned and double damned as a failure in the '90's and down as late as 1910, there is really no limit

how far fur farming may go in the fur world. It is to-day growing so fast, that though I have the latest records I am aware this record of it will be incomplete before a year has passed.

I recall the day when Manitoba's record as a wheat province touched the un hoped aggregate of a million bushels. The Western provinces are to-day shipping 300,000,000 bushels of wheat. But yesterday, the American trade in furs fluctuated from \$17,000,000 to \$30,000,000. In the years of the War, it jumped to over \$100,000,000; and when fur farming has increased the supply of rare pelts, and fur dressing has done for other furs what it has done transforming muskrat from a 12¢ pelt to a \$5 pelt, I look to see America's trade in furs jump like the jump in Western wheat from \$100,000 to \$300,000,000. In 1908, the exports of furs from the United States were worth \$7,712,890, and the imports were \$15,918,149 — \$23,000,000 in all. To-day, that foreign trade in furs exceeds \$100,000,000.

The first successful silver fox farm in Prince Edward Island sold a few seasons ago for \$600,000. The neighboring successful fox ranch sold for \$250,000. Thirty young foxes of first grade in fur were produced from one pair in nine years; and the pelts of this family sold at an average of \$1500. It is a question if any Holstein beauties ever showed as spectacular a record. On 80 ranches in Prince Edward Island at the present time are 200 silver foxes and 3000 of cross and silver and 400 pure cross. Eighty-five per cent of the silver foxes coming on the fur market to-day come from Prince Edward Island. Prince Edward Island prime pelts seldom bring less than \$500 and one brought over \$2000. In 1913, \$12,000,000 had been invested in silver fox farming on the Island. To-day the total is close to \$26,000,000. Eight hundred dollars is considered cheap for a pair of good foxes — vixen and dog — and as high as \$35,000 has been paid for a perfect pair. The danger to-day is not that silver fox farming will not succeed, but that it will succeed so well that it will attract not stock breeders but stock jobbers and fly-by-night speculators.

It was in 1898 that Johann Beetz, a Belgian, brought down a pair of Alaska silver foxes to Piastre Baie on the north shore of the Gulf of St. Lawrence and established them in pens with salmon, lobster and game as a diet. For eighteen years, he watched his fur family till they graded pure dark silver thoroughbreds. Dalton of Prince Edward Island had begun experimenting with red foxes in 1887. Oulton, later his partner, was doing the same with foxes from Anticosti Island; but because the Anticosti foxes had been allowed to run wild, they did not prove true and were killed off the Prince Edward Island ranch. The two men joined interests in 1896 and constructed quarter acre pens within an outside enclosure from which curious sightseers were utterly barred. Beetz had begun by mating his fox to several lady partners; but Dalton had found that the fox is a strictly monogamous gentleman if so permitted; and that led to pure strains of blood and better and better fur. It was in 1900 that \$1800 was paid for a silver fox skin in London; and the two fur farmers began to foresee possibilities that would turn a fox farm into a gold mine. Foxes litter 5 to 9 puppies a year, and begin to reproduce themselves the second year. Could but a perfect prolific strain of silver be established, nine times \$1800 would be a fairly valuable family from little fellows whose food could be kept to a cost of \$50 a year, with a keeper who could supervise a dozen families.

A neighbor of Dalton's in 1898 had been able to buy a pair of foxes for \$340. Ten years later, as good a pair cost all the way from \$3000 to \$35,000. It beat the land boom in the West, or the oil craze in the South; and was equally chancy; for ranchers new to the game lost their litters of priceless beauties from not having provided nests that were damp-proof. Finally by placing a small barrel in a large barrel and packing the space between with insulator cold-proof, the lady fox was provided with a proper cradle for her young; and each year's costly experience was adding to the fur rancher's knowledge.

Naturally, while fox farming was still experimental with critics

and know-it-alls fervently hoping for the worst, failures and dearly bought knowledge were not proclaimed from the house-tops, nor knowledge given out free. In fact, long after fur farming had become an assured success, the first ranches were still keeping their lips sealed and shipping furs from different post offices and placing returns in scattered banks in order to keep their success to themselves.

The early failures arose from :

Mixing alien and poor blood as the foxes from Anticosti.

Permitting the captured foxes to run wild and giving no special care.

Not knowing that the fox is a one-wife gentleman and life partner.

Not using woven wire as an enclosure.

Not cementing the woven wire deep enough to prevent burrowing.

Not providing damp-proof nests for the litter.

Not mating silver to silver close enough to produce a very high-priced fur.

Very few failures arose from lack of proper feeding. Some losses came from fur being rubbed, owing to a small entrance to the burrow, or a tree so close to the wire it permitted climbing and falls, or lack of shade from heat and from fright, when mothers kill their young. Once when a frantic mother, who had been needlessly alarmed by an outsider's intrusion, began killing her young — you can imagine the feelings of the owner seeing pelts of a potential value of \$1000 chewed to death because curiosity had lured an unwelcome intruder inside the forbidden enclosure — the destruction could only be arrested by tossing a live chicken in the fence. Another time, some eggs rolled in distracted the mother's nervousness.

The Belgians have a saying — "The eye of the master maketh his kine fat." It is the same of fox farming. The little things, which only the lover of wild life knows and notes, are the essential things to success. By 1909, five-months pups were selling at

\$3000. By 1913, they were selling at \$16,000. The craze became to trap, not to kill but to get foundation stock for a fur farm.

To quote from the Canadian Conservation's Report on Fur Farming, these findings may be set down as facts :

(1) Silver parents always produce silver pups — never red or cross pups. (See possible exceptions below.)

(2) Red parents mostly produce red, but, occasionally, some cross or patch pups and even a small proportion of silver pups are produced.

(3) Usually cross or patch parents produce cross or patch pups.

(4) When a silver and pure red are bred, they produce red pups with blacker markings on the belly, neck and points than the red parents. The pups are about the color known to furriers as "bastard."

(5) When a bastard red fox and a silver are mated often the litter is on the average 50 per cent silver and 50 per cent red.

(6) Bastard red parents often produce a black or silver pup in a litter — the proportion of silver being about one out of four.

(7) The exceptions to the above rules are that sometimes the colors do not segregate, but rather blend, as in roan cattle when red and white hairs are intermixed and not separated into distinct patches. Cross foxes are produced by mating a red and a silver and sometimes, an intermediate color is secured in the pups. Thus, in some districts, every combination of the red, white and black color of foxes is found. There are foxes which are :

Silver or *Light Silver*. — Silver all over, except possibly the neck; dark below and white only on the tip of the tail.

Silver Black or *Dark Silver*. — Black all over, except the tip of the tail and the silvery hairs on the hips and forehead.

Black. — Pure black all over, except the tip of the tail, with perhaps dark silvery hairs discernible on close examination.

What constitutes a pure silver fox?

The three paragraphs above will explain.

It is given as a curious fact, while the white tip is given as the

mark of identification of the silver fox, three silver foxes in Prince Edward Island had no white tips on their tails and some others had only a few white hairs.

The explanation is sometimes given that silver foxes are peculiarly pure in Prince Edward Island because the province is cut off from the mainland and the blood cannot be diluted with alien strains; but that argument hardly holds good; for some of the finest silver foxes known to the trade have come from Labrador and Athabasca, which are not cut off. Highest prices are now paid for Prince Edward Island foxes; but isn't that because domestication has purified the blood and care has beautified the fur? A colder climate produces a heavier, stronger pelt and deeper pelage; but care produces the sheen and the silky beauty.

In many Provinces and States, it is unlawful to keep fur-bearing animals in captivity. These laws will have to be changed and a license system established.

In fur farms, the location of the ranch will depend on the needs of the animal. The mink must have access to water and fish diet. So must the otter. Fruit diet helps the fur of the marten. Good natural pasturage and ample ranging ground are required for the buffalo. It may surprise the American trade to include the buffalo as a fur bearer; and at the big spring sale in Montreal, the general trade's lack of appreciation of the buffalo as a fur bearer came out in the fact that of buffalo heads and buffalo pelts sent down from Wainwright Park, the hides sold at \$75 — presumably for floor rugs — and the heads sold at \$1200. Yet in the old days in the Northwest, when buffalo were more plentiful than cattle, there was no pelt that gave the same degree of warmth with the same light weight. The hide was proof against any and all weather. Damp did not mat it. Sunlight did not fade it; and the skin was tougher than shoe leather. As to the beauty, that depended on the Indian dressing and the season when the hide had been taken; but with dyeing and dressing firms that can transform muskrat into a perfect imitation of Alaska seal, a well-dressed buffalo can be made into

the best imitation of beaver on the market, with twice the durability of beaver. In the old North-west days, I have seen buffalo coats dressed solely by the Indians and a local taxidermist, which required two looks to distinguish them from beaver. They are a darker brown and a more yellow brown. The hair has less wave to it and more curl, less down and more pelage thick as horse hair; but it lacked gloss under the old treatment. The trouble to-day is the trade does not know buffalo well enough to create a demand for it; and that demand will probably have to be created by some enterprising dressing firm; and this cannot be done till more hides come on the market.

The skunk farm must be isolated owing to the odor. So must the fox farm with the added need for entire seclusion from prying visitors, who alarm the timid fox. Persian lamb and karakul and krimmer sheep farming has not been tried long enough in America to set down many findings as facts, except that up to the present, the skins coming from the Texas farms and California — where the climate more closely resembles Bokhara — are superior to the skins coming from the Northern experiments in sheep farming. "We could not tell the Texas skins from the best Bokharas that came on the market this spring," said a foremost New York dresser to me.

Fox ranches need woodland for shade and screens to hide. The ground must be well drained and dry. The climate must be cold enough to produce a heavy pelage. The ranch must have access to good food and must be located where foundation stock can be increased by new blood, wherever perfect specimens are obtainable.

Subsoil of all burrows must go to hard pan, down to which the fencing must be buried. Always the under surface fencing must be wire. Sometimes the wire is reënforced with sheet iron, sometimes with cement. The top of the fence must hang over inside to prevent climbing up inside. Trees should not be close enough to the fence to permit a climb and a jump; but grape vines up the

fence, or berries help; for foxes, martens and mink all like a flesh diet mixed with vegetable or fruit rations; and the skin shows sheen from such mixed diet. It is notorious in the North where the weasel family have to live on fish and mice and ground moles and birds only — owing to frost or floods winter killing the berries — that the fur has not as fine a sheen as in seasons when blueberries and wild cranberries and raspberries supply a balanced diet; just as it is well known in seasons when a curious scourge carries off the rabbit, the lynx fur may be thick and heavy, but has neither the sheen nor the softness of a winter when the flesh hunters have full fed stomachs. To those kindly souls, who deprecate trapping, I would call attention to the words “flesh hunters” and all the cruelty in wild life so implied. Run over the varieties of the 60 fur-bearing animals known to the trade! You can count on your two hands those that are not flesh eaters, whose very life does not depend on the ravenous tooth and claw. All this cruelty, fur farming obviates, if it does not abolish. Death comes with a quick blow, a silent shot, tongs that break the neck at a clip quick as the instruments of an operating surgeon, or in the case of small animals, chloroform in a painless death.

It hardly needs telling that post holes for a fur farm must be four to five feet deep and the wood treated with creosote to prevent rotting. You can't afford a wobbly fence with nine pups inside worth all the way from \$1800 for the young males to \$10,000 for a perfectly marked mother.

In the very centre of the runway should be the keeper's house. The size of the pens varies all the way from one-quarter of an acre up and down; but always the wild animal to live naturally must have ranging ground. Details of the fox houses vary on every ranch, but the entrance runway must be long enough to imitate a burrow and large enough to avoid rubbing the shoulders and rump of the fox passing in and out. Before the litter comes, the mates should be separated but put in adjoining pens where they can be company to each other through the fence. Special feeding

should precede the birth of the family as in all domesticated animals. Water pans and feed tins must be kept fly clean, germ clean and spotless. The litter usually comes some fifty days after mating in January, which gives ample time for the young fox to come into good fur by the following December.

It seems ridiculous, but a moment's thought shows it necessary, to have a cat with young kittens on the spot, when the fox mother brings forth her young. In case of anything going wrong with the mother, the little blind puppies are fed *à la* wet nurse with the cat. Some have been brought up on the bottle, but that is too ticklish a job to recommend. Blindness lasts 14 to 18 days. The nest is left the fourth week, and weaning takes place about the third month. Litters come once a year and run from one to nine puppies.

Foxes can be induced to be polygamous but are naturally monogamous and they ordinarily bring forth young for ten or eleven years. That is, a good mother can be depended on for from \$25,000 to \$50,000 of pelts in a lifetime. Very few animals can beat this record for profit.

The Canadian Conservation Commission's Report gives these directions for judging a silver fox skin :

"The condition of the pelt in respect to primeness, proper killing, skinning, drying and shipping is important. Skins may be blue or unprime; springy, when the hips and shoulders are worn and the hair loose; dirty, shot, chewed, heated or greasy. In such cases their value is largely decreased.

The skin value of the live animal may be judged from the following standards :

Color. — Glossy black on neck, and wherever no silver hairs are found. The black must be of a bluish cast all over the body rather than a reddish. The under fur must also be dark colored. The fur of silver and black foxes is a dark slate next to the skin.

Silver hairs. — Pure silver bands — not white nor very prominent. In the costliest skins there are only a few silver hairs, which

are well scattered over the pelt. Flakiness, which is the appearance of whitish silver hairs placed close together in patches, is objectionable.

Texture. — Buyers pass judgment on the skins by drawing the hand over the fur. The softest fur is the most valuable. The quality of softness is referred to as "silkeness."

Gloss. — The sheen must be evident. It is caused by the perfect health of the animal and the fineness of the hair, as well as by hereditary influences. Woods and humid atmosphere also favor this important quality.

Weight. — A good fox skin will weigh at least one pound, the weight usually varying from ten to nineteen ounces. The thick, long fur makes the weight. This is a very important point, as heavy fur is more durable and handsome.

Size. — The value of silver fox pelts increases with the size.

Prices for pelts and breeding stock have already been given. The New York Stock Exchange and the Chicago Wheat Pit have sometimes been censured for dealing in options and futures, but in Prince Edward Island, the puppies of well-marked silver foxes are usually purchased by option long before they are born.

The only imitation of silver fox is what is called "the pointed fox," a red fox or cross fox dyed by hand lustrous black with the silver hairs set in, or glued; or a fine Arctic fox dyed black, with the tips of some hairs waxed till the black goes on the other hairs when the wax is removed, but this last process is no longer in vogue. As told elsewhere the test of a dyed skin is — first the undyed under-skin is white; the dyed is golden or darkened by the dye. Hairs glued on can be detected. A white tip must be set on the tail to imitate the silver fox; and this can be detected by the end of the tail, or the white hairs set in. But always, the dyed silver fox is never as glossy and shiny as the natural silver fox.

Of fox skins, 1,337,000 pelts are yearly used in the fur trade. How many of these are silver fox skins, it is impossible to say, certainly not 1%. Until over 10% are silver fox skins, there is

little likelihood of the price slumping; and if the price of such a beautiful fur falls in price, it will increase the demand for the fur.

When you come to the fox farming of Alaska, distinctions must be made between the white Arctic fox or polar fox, and the blue fox. Scientifically, they may be the same family of foxes. As to pelts, they are not. The white fox is brown in summer, with sides roan or drab. The winter pelt has long pure white hairs above the pelage. The blue fox is gray blue all the year round and is found slightly south of the Arctic fox's range. It comes from Greenland, Iceland, Alaska, and its pelt sells at many times the value of a white fox. Blue foxes have been imported to Prince Edward Island from Alaska. They have not yet succeeded as a commercial possibility, whereas red foxes brought to the Prince Edward Island ranches from Alaska are improving their strains and other strains. The climate in Prince Edward Island is probably too mild for the blue fox to thrive, just as it is notorious that blonde people do not stand tropical heat as well as brunettes and dark pigment races.

On the islands off Alaska, blue fox farming is successful. No outlay is required for fencing. The foxes are protected from the ravages of wolves and they have an abundant supply of sea food, fish, crabs, seal meat, sea birds, sea gull eggs laid on the naked rocks.

These foxes mate in February and March and bring forth their young in April and May, three to six.

Blue fox skins have of late run in price from \$75 up, where white fox skins seldom cross \$60 and average low as \$10 to \$30 for poorer grades. Breeding pairs for blue fox can be purchased from the Bureau of Fisheries of the Department of Commerce and Labor at \$200 a pair. Islands for blue fox breeding can be leased at \$100 a year. Near Kadiak is an island fur farm with 1000 blue foxes; and since the Government took hold of the management of the Seal Island, 700 to 1000 blue foxes a year have been trapped there. At last reports, there were some 30 islands leased in Alaska for blue fox farming. Unlike fox farming in Prince Edward Island, in the

fox farming of Alaska, the foxes are not confined in pens but left running wild.

When seal killing dropped off on the Seal Islands in the '90's blue fox life also decreased, evidently from starvation, or lack of abundant meat.

Great care is taken in Alaska to kill none but prime skins, and for this purpose box traps are used instead of steel, poison or rifle. If the fox trapped is found not to be full grown, to have defective fur, to be a female with young, it is let out. Before the fox can be killed, it must be examined by a government inspector who decides from color of the fur, age of the animal, general heft, whether it should be kept to multiply its kind or killed. The teeth are examined for the age. Each animal let go is branded. No, don't scream. They are not branded with red hot irons. A ring one inch wide is cut with scissors in the fur of the tail and the little captive is let hop off. If a blue fox so branded is caught by a fur trapper, its fur will not be passed by the government inspector but is confiscated. Blue fox pelts are prime only from November to January.

White foxes are found in litters of blue, but they are inferior pelts; and the government game wardens are trying to exterminate white foxes on the blue fox farm islands. Every Arctic fox entering a trap is killed. The Indians are allowed to shoot them under any circumstances. Very little disease is found among blue foxes, but the infant mortality is high, owing to the mothers whelping their young on naked damp rocky burrow, or on the open rock. In 10 years the average of blue foxes trapped in Alaskan Islands has run from 700 to 1400, about half of which have been turned loose for breeders, the other half coming out as pelts to the trade.

At first the attempt was made as down on the St. Lawrence with silver foxes, to save all females, kill all the males but a few and force polygamy; but the fox did not thrive under man's regulation of an animal's morals; and now enough males are left for monogamous mating; and blue fox life is increasing faster.



Types of Badger and Lynx and Wolf Skin Effects.



Very Fine Coon Coat.

In Alaska, the hunting of blue fox by dogs has been prohibited since 1918; as the dogs injure the fur and maul foxes which are branded not to be taken. Latest reports of the fur farms in Alaska show a tendency to provide pens and corrals for the silvers and reds as in Prince Edward Island, but to let the blues run free. One island farmer in 1918 shipped out 224 blue pelts and 15 white, from which his farm yielded \$14,000. He had been operating since 1912. The greatest loss of life in the blue fox farms was from the foxes fighting among themselves and from the ravages of eagles on the young pups. One farmer paid the Indians a bonus for eagles killed; and in 10 years he numbered 1000 eagle claws.

From Alaska, for which the United States paid \$7,200,000, more than \$80,000,000 of furs have been taken. In 1918, more than \$2,000,000 of furs were shipped, of which 9000 pelts were beaver, 1400 blue fox, 4500 white fox, 7600 lynx, 1000 marten, 24,000 mink, 1600 otter, 1 sea otter, 34,800 seal.

These figures have their own lesson for Canada. North of Athabasca and Labrador, she has the great fur preserves of the continent. Let her farm it as carefully as Uncle Sam is fur farming Alaska, or Prince Edward Island, the silver fox.

CHAPTER VI

FUR FARMING FOR BROADTAIL, PERSIAN LAMB, ASTRAKHAN AND KRIMMER

It is said there are 5000 species of mammals, of which 23 have been domesticated and 60 are fur bearers.

Broadtail, Persian lamb, Astrakhan and krimmer represent the dividing line and meeting place between these two. They are both domesticated and fur bearers. Perhaps our children's children will live to see the day when all the fur bearers are domesticated. Perhaps that is what the prophet meant when he foretold the lion lying down with the lamb. Certainly, the cat suckling the fox kittens may be a prototype of what is coming.

To clear the decks of common misconceptions first — Persian lamb isn't Persian lamb at all. It comes from Bokhara, Turkestan, Central Asia; but as it first came to European markets by Persian caravans, it took the name Persian lamb.

Second, the curliest and glossiest Persian lamb is not obtained by killing the mother to get the unborn kid. The kid to preserve the gloss and curl must be killed within a few days of birth, soon enough to avoid the reddish tinge that comes to the fur and can be seen by holding it up between the eye and the light.

Sheraz is half-Persian lamb. It comes from the south of Persia and resembles wool more than fur.

Next, Astrakhan is not dog skin. It is a lamb skin from the south of Russia.

Gray Persian lamb is really krimmer, lamb from the Crimean region of Russia.

The farming of these furs in their native habitat does not greatly concern the trade in America, except as we can transfer the farming here.

The lamb that makes Persian fur, grown to a sheep makes the Bokhara rug. Arab chiefs are to this trade what chief factors used to be to the American fur trade. They are the middlemen between the trade and the producer. Chieftains yearly bring 40,000 to 50,000 skins each to the Far Eastern markets. Sometimes the herds are driven to market alive, the lambs killed, the flesh sold as meat, the hides as fur. At other times, the hides are brought in long, slow-moving caravans and sold as dressed fur. The tightest curl and glossiest black bring the best prices for fur; and for fine fur only the saddle of the back is used. Gray skins are sold also; but gray are also sold dyed black. As in every other fur, the care and the nourishment of the mother before bringing forth her young determine the fine quality of the pelt.

By caravans it takes about the same time to bring the skins from Bokhara to the Russian markets as to bring the skins from Alaska or Mackenzie River to St. Louis—60 to 70 days. The pelts are brought out sewed face to face in pairs done up in bales of 160 pairs; and in one caravan will be 400 bales worth all the way from \$100,000 up.

The skins are first cleaned in running water, then cured in tanks of salt, barley flour and water, then scraped with a dull knife from all flesh and hung to dry 12 hours in the sun. They are washed again in running water and sprinkled with barley flour. They are then sorted and stamped back against back, and done up in bales for the shipment to market.

Dr. Young of Texas, the first American to rear karakul lamb successfully in America, says there are six distinct classes of these fur-bearing sheep. It was in 1908 he imported fifteen head to America. It was only when he crossed Karakul Afghan with an Arabi strain that he produced a skin bringing a price of \$6.50 a pelt. In 1912, Dr. Young imported some true Bokharas. Fur farmers

who buy the first strain will not realize a good fur price. Those who buy descendants of the second importation will; and American traders tell me descendants of the second importation are now coming on the market. From Dr. Young's original stock at Belen, Texas, have spread flocks to Texas, New Mexico, Kansas, Maryland and Prince Edward Island. One of the tests of the fur producing strains from the wool strain is the absence of soft under wool in the pelage. In any case, the flock of the karakul is always as good a seller as our domestic sheep; and if the herd does not grade up as fur, it may as wool. The qualities that distinguish fur from wool are — tight curl, smallness and crispness of the wave, lustre and silkiness of the skin. All Persian lambs to-day are improved by a brush lustre of dye. In fact, good Persian lamb like good seal is one of the dyed skins that goes in first rank.

Lambs to be used for fur should be killed within 5 days of birth. After 5 days, the curl coarsens and commands the price of a common fur; and after six weeks, the skin may be described as wool. Slinks, or still-born lambs, are the finest fur of all. Baby lamb, or broad-tail is the name usually applied to these still-born or very young lambs. Before the War, \$12 was cheap for such a pelt. Since the War, prices have increased 140%. Natives of Bokhara are as jealous of selling any of their sheep as trappers in the Canadian North are of their fur secrets. Sheep on the ranch cost \$60 and must then be brought out at great risk thousands of miles. If the sheep brought out by Dr. Young of Texas finally multiply into trade proportions, it will spell the end of the exclusive Persian lamb trade for Bokhara of 1,500,000 pelts yearly; and just before the War, the Emir of the district had issued an edict prohibiting the exportation of Bokharas.

Poor Persian lamb skins do not bring 25¢ each. Good skins run from \$3.50 to \$20. The average of 7229 skins recently sold in Montreal was \$8.40.

The durability of Persian lamb depends primarily on the first dressing, second on the dyeing; and the principal object is to avoid

cracking. Too thin skin can be reënforced but cracked skin will rip. The test as told elsewhere is to stretch slightly. If there is a sound of an impending rip, beware the skin.

Pure bred stock to-day is selling at from \$500 to \$1000; and with those prices ruling, while the same financial success may not reward the Persian lamb farmers as has rewarded the silver fox farmers, who get 9 puppies increase from a pair a year, still the Persian lamb is not a monogamous gentleman. He has up to 20 wives, and 20 lambs a year from one \$500 sire with hides at \$8 to \$15, and flesh at 30 to 40¢ a pound, with the cheap range of feeding ground on which sheep subsist — mean a profit that may easily place Persian lamb farming second to silver fox, and such mink and sable and marten farms as are still in an experimental stage.

Two official reports have come out on karakul sheep farming in the United States and Canada; one by the Animal Bureau of the Agricultural Department, Washington, the other by Dr. Young, himself, whose success has exceeded his expectations. Says the U. S. Year Book of 1915: "Since 1909, fifty-four of these sheep have been brought to the United States. The importations have consisted chiefly of rams which have been mated with ewes to determine what class of ewes will produce lambs having good skins. Flocks owned in Texas, Kansas and New York now comprise over 1000 head of sheep having one-third or three-quarters Karakul blood. Besides these grades there are 60 rams and ewes that are either imported or descended from imported stock.

"The fur commonly known as Persian lamb is taken from the young Karakul lambs. The Persian lamb used in the United States is produced chiefly in Central Asia, in Bokhara. The future of the industry in this country depends on the results of mating Karakul rams with our ewes.

"The furs are known as Persian lambs, Astrakhan, Broadtail and Krimmer. Persians, Astrakhan and Broadtail skins are all black in color, but vary in the character of the curl. Persians have the most pronounced, most uniform and tightest curl and the

greatest value. Astrakhans have longer hair, the curl is more open and usually has less lustre or gloss than the Persian. The Moirée Astrakhan is a very soft light skin, having straight hair, but a very satiny lustre. Broadtails are taken from lambs prematurely born. Skins of this class are soft and pliable, as well as light in weight. Their hair is shorter than in Persian skins and instead of being tightly curled, exhibits a very attractive wavy pattern. Krimmer is a gray fur produced mainly in the Crimean peninsula.

"Between 1895 and 1913, prices have increased 180%."

Since the Agricultural Department made this report, prices have again advanced, largely because of the shortage of supplies owing to the War.

"The sheep takes its name from Kara-Kul — the black lake — a village in Bokhara. The elevation of the area is about 8000 feet. The summers are very hot and dry. The best feed occurs from the middle of March to the middle of May, then vegetation dries up. The number of sheep in the territory is estimated at from three to four millions, and the annual export of lamb skins runs at about 1,500,000. The skins are collected by traders and resold at the annual summer fair at Nijni Novgorod in Russia, 272 miles by rail East from Moscow. About 166 skins are packed in a bale; and become the property largely of Germans from Leipzig. In Leipzig, the skins are sorted for export and some dyed, though usually the dyeing is not done until the skins reach the firms by which they are made into wearing apparel.

"The foundation of the present fur-bearing sheep was the early native Arabi. The blood of the Arabi in combination with the black Danadar produced the sheep kept at Karakul. With the rapid rise of values, the size of the flocks increased. The Karakul is a sheep of medium size, with black face and legs, and a long coarse fleece of some shades of gray. The rams are horned and the ewes polled. The body of the Karakul has not a close resemblance to any breeds in America. It has the narrow back and flat sides common to sheep not bred for meat. A very distinctive feature

is the shape and size of the tail. It is described as 'Broadtail.' Being quite short and very broad next to the body, fat accumulates and forms a triangular development that may weigh 5 to 6 pounds, extending towards the hocks.

"In some specimens of the breed, there is a noticeable amount of finer and softer wool near the skin. This undercoat is not desired, as it is stated that the lambs having the best curl and lustre come from parents having the least fine wool. Karakul fleeces are commonly sold as carpet wool.

"The Karakul is adapted to areas of extreme temperatures and limited rainfall. Reports from Texas state that the Karakuls were better able to resist cold storms than sheep of other breeds. The conformation of the Karakul does not commend him as a mutton producer. The use of a Karakul to impress upon a flock bred for mutton would sacrifice a good deal and not be desirable.

"Only three lots of Karakul sheep have reached this country. These were all imported by Dr. C. C. Young. A number of descendants have been sold to Prince Edward Island, Canada, to Texas, Kansas and New York." I have considerably condensed the Department's Report, which closes with these admonitions on skinning:

"Cut a straight line down the belly and also cut down on the inside of the legs to meet the centre line. Do not cut off any part of the skin; leave on the ears, nose and tail to the tip. Be careful not to make unnecessary cuts. Stretch the skin evenly on a board, fur side down, and dry in a cool place. Do not salt the skin or double it up for shipment purposes. The principal object is to avoid cracking the skin. See that it is properly shaped when nailed down to the board and thoroughly dried before shipping. The skin should not be sun dried. In packing a number of skins the first one should be laid with the flesh side downward. The second should have the fur side downward. The next should be placed like the first, and so on. This prevents the flesh sides from lying in contact with the fur."

It is well, perhaps, to add to this Report, an official Report issued by Dr. Young, himself, who has transferred his sheep farm to Kerman, Fresno Co., California, especially as Dr. Young's later experiments do not agree with the Agricultural Report in some details as to mutton values.

"The Karakul Desert Sheep will produce 'Persian Lamb' and 'Astrakhan Fur' in the first cross with domestic coarse-wool breeds. The skins of the lambs when two or three days old being used for that purpose. This kind of fur is used for coats, collars, caps and muffs by the most fashionable set of society, and according to the United States Department of Agriculture, we require \$14,000,000 worth of furs annually.

"According to Armour and Swift, Karakul mutton is free from the 'woolly' taste so often objectionable in our domestic breeds, and the lambs mature very quickly, in fact 60-pound lambs in two months are not uncommon.

"Karakul ewes compare favorably with milk goats and the milk is richer in fat than goat's milk. The fat globules are very fine and easily absorbed. For ages the Karakul has been the cow of the Kara Kum Desert of Central Asia, and the famous 'Brinza' cheese possesses the most delicious flavor.

"The wool of the mature sheep is very coarse and ideally adapted for coarse textiles, rugs and felt and 21 pounds of 31-inch long staple is the most any Karakul has ever produced but being free from the fat and dirt of the fleece of our domestic sheep this is an enormous yield. Under proper grading and when of sufficient length Karakul wool brings a higher price than does the wool of our domestic breeds.

"The Karakul Desert Sheep, which for centuries have had to compete with the camel and the burro, will thrive and accumulate fat on pastures that would starve our domestic breeds. Short-lived weeds and the Sacksaul brush closely resembling the chemisa of San Luis Obispo County is all these animals have had to feed on. During the entire summer past we grazed our sheep in Fresno County on alkali weeds and they did well, and such brush as Chemisa,

Rabbit Brush, Trefoil, Tree Lupine, Silver Lupine, Wild Radish, Scotch Heather and Lathyr is relished by them. The Karakul sheep will enable us to reclaim millions of acres of land practically valueless to-day.

"In point of hardiness no domestic animals in America can compete with the Karakul except the burro and the Mexican goat. Our farmers who are anxiously seeking for the most effective means by which to destroy Johnson grass, Bermuda grass, Morning Glory, Thistles, etc., will find the Karakul of inestimable value.

"The Karakul sheep are mixed hybrids, native to the deserts of Central Asia.

"They have been raised for years by savage natives who know nothing about scientific breeding and are consequently in-bred and cross-bred; there is no fixed type in their native country.

"It has taken eight years of selective breeding in this country to get a semblance of type.

"They are now being bred of two types:

"The Karakul Arabi, or smaller type.

"The Karakul Doozbai, or larger type. We also have certain specimens that can be considered as belonging to the intermediate type.

"They will stand the greatest extremes of heat and cold and will thrive in any country as long as their pasture is well drained.

"There are 500 known varieties of weeds in the United States and the Karakul will eat 490 of them.

"There is as yet no registry of Karakul sheep and the types are not fixed, therefore we sell only tested Karakuls where breeders choose to raise them for Persian fur only.

"As Mutton Producers:

"They are the hardiest and best rustlers of the sheep family and will thrive on range which would not sustain our native sheep. During the terrible drought of New Mexico during 1918, where our flocks were pasturing, even the goats did not show anywhere near the hardiness of the Karakuls.

"Their lambs are exceptionally strong at birth, will mature about one-third earlier than those of our native sheep and are equal in size to our largest native breeds. In fact, the largest of the Doozbai Karakuls, greatly excel in size.

"Being free of the woolly taste of our native sheep the fat which is the butter of Central Asia, is ideal for cooking purposes. Remember Karakuls require no feeding to accumulate great quantities of fat. The meat of the Karakul is free from the sheepy taste and has a delicious flavor of its own.

"They belong to the broadtail and not to the fat-rump breeds, and the fat is better distributed over the carcass than is the case with the Persian fat-rump sheep with which the Karakul is sometimes confused. They are able to produce as much fat on weeds and in the same length of time as native sheep fed on alfalfa and milo maize. See tests made by the Hon. John M. Wyatt, treasurer of the Panhandle & Southwestern Stock Men's Association, vice-president First National Bank of El Paso, Texas.

"The pelts of the lambs of this type, which die unavoidably are worth from \$4 to \$10 each, which, in a season's lambing, is a point worth considering. Among those prematurely born, one often finds skins of rare value called 'broadtail,' baby lamb, 'unborn lamb,' etc., often valued at \$20 wholesale. The ewes are not slaughtered to obtain this fur as some dishonest furriers will tell you.

"As Fur Producers :

"They are the only sheep which produce valuable fur.

"The dressed skins of the Karakul lambs are known on the fur market as 'Persian Lamb,' 'Broadtail,' 'Baby Lamb,' 'Karakul,' 'Astrakhan,' and 'Krimmer.' The different grades depend on the tightness of curl, lustre, and degree of pigmentation.

"The so-called Persian sheep of this country is not a fur-producing sheep at all unless crossed with Karakul rams. The name 'Persian Lamb' comes from the fact the Persians were the first to export Karakul skins to European markets.

"A good skin from a lamb two or three days old with short hair, tight curls and good lustre is worth from \$10 to \$20 in wholesale lots.

"Furs with more open curl and less lustre sell for prices ranging from \$5 to \$10 each.

"A good fur-producing Karakul ram will produce lambs with just as good fur when bred to a native coarse wool ewe which has no fine wool admixture as when bred to a Karakul ewe free from fine wool. If a Karakul ewe has fine wool besides coarse wool she will not produce as good a skin as a domestic coarse wool ewe would if free from fine wool.

"Tight pipelike curl and high lustre are what makes the fur valuable.

"The United States, according to a circular issued by the Department of Agriculture in 1912, imports \$14,000,000 worth of these furs each year.

"There is a big future in raising Karakul sheep of either variety for breeding stock before any will be slaughtered for fur in this country.

"If you want a ram for the production of mutton almost any good big Karakul ram will prove satisfactory and you will find your lambs to be strong, vigorous, good rustlers and quick maturing besides producing Astrakhan fur.

"If you want a ram for the production of fur it is safest to buy only a tested ram who has produced progeny with the tight curled fur of Persian Lamb grade as shown by the accompanying illustrations.

"It is important that the native ewes used for crossing be free from fine under wool, and be the coarse wool class, such as Navajos, Mexican Hairy, Corientes, Persian Fat-Rumps, Black Faced Highlands, Lincolns or Cotswolds.

"It has been found that inbreeding is detrimental to the production of fur.

"As Wool Producers :

"Up to a few years ago, few Karakul breeders paid any attention

to the wool question, even though Karakul wool 12 inches long would bring \$1 per pound. It was also known that Karakul rams shear from 8 to 21 pounds, ewes from 6 to 14 pounds. Wool 31 inches in length from one ram sold at \$2 per pound. A 5-months old lamb sheared 7 pounds, 7 inches long; rams shearing 18 pounds in 12 months are not uncommon. Six pounds is the least any Karakul ever sheared.

"If careful selection is practised, the Karakul will more than hold its own with any breed, although often the wool does not bring more than any mixed wool, this, however, can be avoided. Where the wool was properly selected it sold in June, 1917, for 49¢, which was the price ordinary wool brought.

"With careful breeding, the Karakul will easily excel any other breed in America from a wool standpoint. I have known half-breed Karakul-Navajos to shear 10 pounds, the mother hardly clipped 3 pounds. The Karakul will give twice as much milk as any other breed in the world, therefore no milk goats are kept in the desert of West Turkestan. The famous 'brinza' cheese made from Karakul milk is the best in the world. The milk is held by the natives as possessing great curative properties in all stages of tuberculosis, neurasthenia and pernicious anemia. The Karakul is the cow of the natives of the Kara-Kum desert of Central Asia.

"Remember Karakul ewes never disown their lambs, never wear their teeth down and herd very close. They can cover tremendous distances daily and live where an Angora goat will starve, and as browsers and destroyers of underbrush, no domestic animal can compare with them. Should be introduced in well-drained cut over timber countries, can stand any climate, will thrive on Russian thistles and accumulate great quantities of fat; 60-pound lambs in 60 days are now the exception, but with care can be made the rule.

"October 3, 1911.

"Dr. C. C. Young,

"Dear Sir :

"I take great pleasure in testifying to the superior mutton qualities of the Asiatic Karakul Broad-tail Sheep because I am very much interested in seeing a development of this strain in this country.

"Our experience has been that on crosses between Asiatic Karakul Broad-tail Sheep and one or two other domestic varieties, lambs were obtained which at the proper age weigh 90 to 105 pounds and have the most delicious flavor, as well as the heaviest yield of mutton.

"I hope you will be successful in introducing this strain generally because I think it will improve our Southern stock, particularly from a mutton standpoint.

"Yours truly, Armour & Company.

"H. E. Finney, General Manager."

The pork packers of Chicago seem to corroborate Dr. Young's claims in full.

CHAPTER VII

THE DYEING AND THE DRESSING OF THE FURS

MORE furs are ruined in the dyeing and dressing than in the hunting.

If the knowledge of raw furs involves highly technical discrimination, ten times more so does the knowledge of dyeing and dressing; and while the secrets of the trapper may be found out by spying on his trail, the secrets of the dyer cannot; for his formula is written in code. His laboratories are as secret as Masonic rites; and in the rooms where the final lustre is given to such rare furs as seal, grilled wires bar windows and locks bar doors; and the question is now being tested in a case before the courts whether one firm may hire away a secret dyer from another firm and so obtain possession of the secrets of trade practices and not render itself liable for using "stolen" processes. I have no opinion to express on this hotly contested subject. The Supreme Court will pronounce its decision with which the dyers will have to abide; and whatever the decision, it will be as protective for the future as it is punitive for the past.

Vegetable dyes hurt the skins of the pelt least. Indian dressers of undyed furs are the most expert.

Dyeing is often blamed for what is really the unprime quality of the fur. The skin of the unprime fur has a bluish cast, just as the skin of the prime fur has a creamy white, and the skin of the dyed fur has a golden cast. The pelt should be taken just when prime. If taken before prime, it may shed or lack lustre. If taken after the prime, it may show the wear of the young animal's fights and scampers.

When you examine fur closely, you find three layers — the rough over hairs, the thick pelage or fur proper, the down next the skin. Open the rough over hairs with your fingers. Below the fur proper open to the down; and in the most of furs when undyed the fur is lighter in color next to the skin. In many furs, the under fur, or down, is a light drab, or pale blue. The beauty of the pelt in fox is ascribed to the lustre and depth of the over hair, in beaver to the pelage proper, and in chinchilla and mole and squirrel, to the pelage and the down.

There are only two commercial ways of skinning the fur beaver :

(1) The way a sheep is skinned, by cutting down the belly and opening off the pelt the way a man takes off his coat.

(2) By slitting up the hind legs and peeling off the pelt, the way a woman takes off her glove.

Pelts skinned by a long front cut are stretched flat. Pelts peeled off are stretched with a dull edged board shoved inside as you stretch a pair of shoes with a shoe tree. Peeled pelts are described as "cased." The pelts commonly "cased" are fox, fisher, marten, weasel, otter, skunk, lynx, cat, muskrat. The pelts taken off by an open cut are beaver, bear and all the large furs. Tail and claws should be left on and the shape of the head left unimpaired. Before stretching the skin, all fats and flesh should be carefully scraped off; as they will cause decomposition and weakening of the skin. The fats of the skunk and the seal are so valuable, they are rendered into oil; and in case of the Hair Seals and Harp Seals of Newfoundland and Labrador, the oils are valuable as the pelts.

The trapper should wrap each separate skin in separate burlap, and sew the fine skins in muslin, and to prevent injury, they should be boxed for shipment to the buyer. Either a dull knife, or a bone knife, should be used for scraping. Even the flat board on which the skin is laid for scraping should have dulled edges to avoid creasing and cracking the skin, where it will afterwards split. Some dealers say, "Don't scrape the skin," by which they mean,

when taking off the flesh, scrape the flesh, but don't abrade the skin. The fur side should not be exposed to the sun, and the drying should be done in a cool place away from artificial heat, which cracks soft skin just as it ruins shoe leather. Beaver and muskrat should be stretched on a hoop. Coon should be nailed on a wall to dry. Mink and marten should be stretched very gently lengthwise.

The plucking of the coarse over hairs should be left to the final trade dresser. When Alaska seal has been plucked, it is drab. Up to the time of the War, the dyeing of seals excelled in London, of Persian lamb in Germany, and of "topping" over hairs in France.

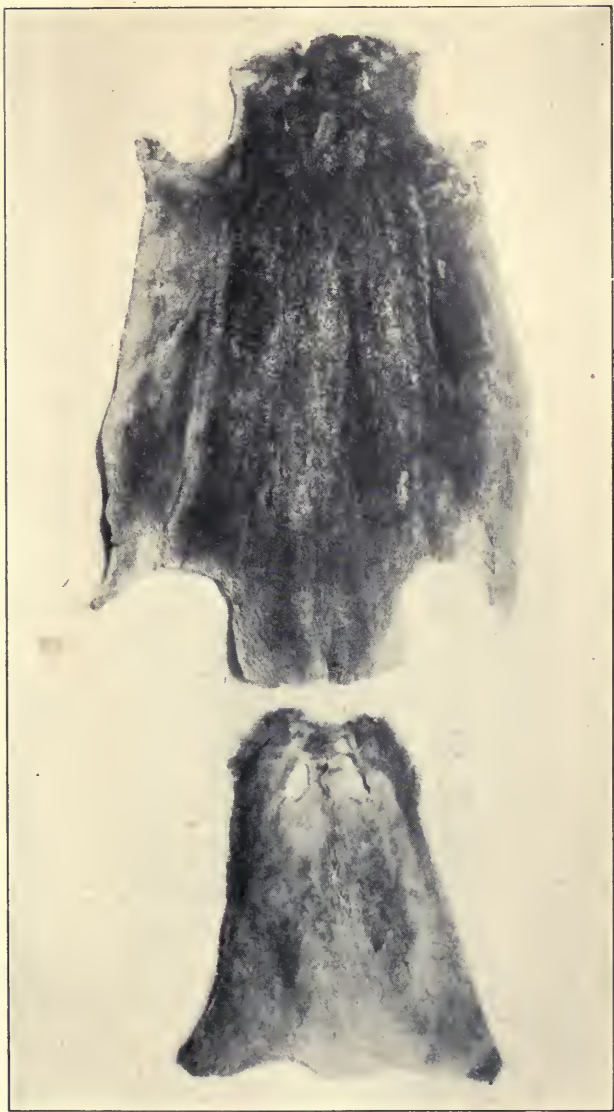
No general rule can be given for dyeing except that the closest to the natural color is always best and that rule has its great exception in muskrat dyed as a perfect imitation of Alaska seal.

The pace of improvement in the fur trade is moving so fast to-day, that any methods described as perfect this year may be discarded as obsolete next year. The Canadian Conservation Report quotes the old method of dressing furs:

"The older method of dressing furs, used universally until the introduction of machinery is to place the skins in a lye of alkali; when the pelt has become soft, the skins are tubbed, and then shaved by passing them over a large knife and placed in an upright position; they are next buttered, and put in a large tub of sawdust by men half naked, who tread on them for some time, the heat of their bodies rendering the leather soft and supple; they are then beaten out and finished."

But modern methods have introduced machinery for almost every process except the brushing in of the final lustre, and the feathering of sable stripes, and the cleaning by sawdust tramping, which must still be done with naked feet to soften the pelt with animal warmth.

To give you the faintest idea of what dressing means — to quote the Canadian Fur Report again — the pelts must be "beamed,



Nutria.

Beaver — Small Specimen.

Note Comparative Sizes.

Courtesy Gottlieb Company.



Courtesy Gottlieb Company.

Fisher Skins — a Fur that Defies Imitation, Sells for \$100 to \$300 for Neck and Muff Pieces.

scraped, tramped, soaked, fleshed, tanned, dried, drummed, greased, kicked, drummed with sawdust, dyed, shaved, pared and foot-tubbed before they are ready for the manufacturer."

The machinery used is :

Washing tanks, which are made of wire mesh and revolve in a tank of water ;

Drying vats, which revolve very rapidly, to throw moisture out of the skins ;

Cleaning drums, which, with an exhaust air arrangement, remove the sawdust or corn starch from the skins ;

Polishing drums, which revolve the skins with sawdust to polish the fur and hair ;

Wooden tanks, for dyeing ;

Revolving stone cylinder, for beaming ;

Kicking machine, for pounding the skins ;

Sewing machine, built especially for joining fur ;

Clipping machine, for shearing the under fur even.

Canadian fur dressers treat fox and mink as follows :

<i>Fox</i>	<i>Mink</i>
Pounded	Pounded
Wet with sawdust	Soaked to soften head
Fleshed	Fleshed
Salt water put on skin	Flesh pickled
Dried	Dried
Broken in foot-tub	Drummed with sawdust
Buttered or greased	Greased and pounded
Tubbed	Stretched
Cleaned with sawdust in drum	Drummed (sawdust)
Dried	Stretched
Polished in drum with sawdust	Drummed (sawdust)
	Stretched and beaten
	Dyed

"At 'the fur dressers' the skins are first dampened on the flesh side with salt water and left all night to soften. The following

morning they are placed in a tramping machine, where they are tramped for eight or ten hours. The machine works about 2000 pelts at a time.

"The pelts are next covered with a mixture of sawdust and salt water, and remain so overnight. The following morning, they are cut open down the front and are then fleshed, one man being able to flesh 200 to 300 a day. The skins are next stretched and hung up to dry. When thoroughly dry, they are again moistened with salt water on the leather side, remaining so overnight. They are next brushed on the flesh side with animal fat — butter or fish oil and tallow — and laid in pairs, with fur side out. After remaining overnight they are placed in tramping machines and worked for six or eight hours, or until thoroughly soft and pliable. They are then stretched in every direction.

"The next process is cleaning. The skins, to the number of 300 or 400, are placed with sawdust in revolving drums exposed to steam heat. They are revolved for about three hours, when the sawdust will have completely absorbed the grease. The skins are next incased in a beating drum, where they are revolved for two or three hours. On removal, they are beaten with rattans, and the fur is cleaned with a comb. The heavier pelts are fleshed down thin, thus completing the operation of dressing for the majority of skins."

Come now to the treatment of special furs. The Germans excel in the dressing of lamb, squirrels, cats' skins, beaver; the English in the dressing of chinchilla, marten, sable, skunk, fox, seals; and now with the War disrupting not only the trade in skins but the workers available, it is a question if the American dressers have not come up in excellence on a par with both countries. Certainly, the skin dressed and dyed in America to-day cannot be detected from the skin dressed and dyed in Europe.

As the process of seal dyeing is now in the Courts, little can be said about it except that the excellence of the English system is ascribed to a certain proportion of copper dust, antimony, camphor,

verdigris and gall nuts. The seal dye is both brushed in by hand and the fur dipped. From 12 to 14 final coats are brushed in by hand to give the fine lustre. Perhaps this may explain why real seal comes so high in price; for few of the expert workers charge less than \$100 a week. The excellence of Germany's treatment of muskrat and lamb is ascribed to the quality of the running water and the softness of the climate; but I doubt this time-honored explanation; for no process on earth to-day excels the American system used in Brooklyn and Newark, where both the climate and running water differ from Germany's.

Reference has been made to the grading of furs before sale at the great auctions. Graders and sorters are also among the most highly paid fur workers. The grading and sorting differ for each fur. Beaver is graded — Large, Small, Medium, Cubs. Skunk is graded — Skunk and Civet Cat, then as to primeness of fur. House cats are graded — Black, Spotted, Small; and for people who pity pussy, it is well to remember the feathered songsters of our gardens, who rejoice that the high price of furs has practically exterminated the stray, ownerless cat. Fishers are graded — Dark, Medium, Brownish. Red foxes are graded first as to whence they come, Labrador, Alaska, Nova Scotia; then as to Large, Medium, Small. Mink also are first graded as to their habitat, second as to Quality, Color, Large, Medium, Small. Otter are graded as to habitat, then as to Quality down to four sizes, then as to Color, then as Large, Small, Medium.

It is interesting to compare three great authorities on American furs as to the numbers of each kind of fur demanded by the annual market; and yet with a whim of fashion, the figures correct for to-day may be erroneous for to-morrow. Petersen, a great authority on American furs, and Hornaday, the great authority on natural life, give the following totals. To these are added the totals of certain furs yearly sold in London, and the total of furs yearly sold in the entire world, as given by Brass. Brass is a great world authority on world production.

	PETERSEN	HORNADAY	SOLD IN LONDON	SOLD IN WORLD (E. BRASS)
Badger	185,000		34,000 (1906)	160,000
Beaver	81,000	80,000	99,000 (1906)	81,000
Ermine	1,000,000		40,000	1,110,000 (Siberia)
Fitch	350,000		77,000	300,000
Silver Fox	6,000		2,510	4,300
Red Fox	1,000,000	1,165,000	158,961	1,200,000
Marten	150,000		21,000	210,000 (Rus., Jap.)
Stone	250,000	120,000 (U. S.)	12,939	380,000 (Am., Sib.)
Mink	1,000,000	60,000 (U. S.)	299,254 (Amer.)	640,000 (Am., Asiatic)
Muskrat	5,000,000	8,000,000	5,000,000	8,000,000
Otter	90,000	30,000 (U. S.)	21,000 (Can.)	124,000 (All Coun.)
Coon	500,000		310,712	600,000
Sable	175,000		124,000	235,000
Skunk	1,200,000	1,500,000 (U. S.)	1,068,408 (Can.)	1,500,000
Squirrel			2,000,000 (Rus.)	15,500,000 (Sib.)
Rabbit			80,000,000 (Australian and Belgian)	71,500,000
Fisher		10,000	5,900 (Can.)	10,000

A moment's reflection explains why these great authorities differ so widely in certain furs, why America will have a large sale of otter and London a small one. When prices fall owing to any cause whatsoever, a whim of fashion or war, it is the custom in London to withdraw the fur from market and hold it in storage till the price goes back to at least what was paid the trapper. In America, all furs consigned are sold, though they may be bidden in by their own sellers. Petersen computes what the trade is selling, Brass what the fur world is producing; and there again storage may hold huge quantities off the market for intervals; but these totals give some idea to what proportions the world fur trade is now reaching.

To come back to dyeing — Indians used water made from ashes for cleansing furs and the brains of the buffalo to grain the pelts.

In London, before the War, were 14 great houses exclusively devoted to dyeing, where men grew up from apprentices to experts and were regarded as a sort of secret order of their own. The same was true of at least two centres in Germany; but as the War stopped the supply of raw material, both the dye secrets and many of the dye operatives came to America, where fur dye works have swollen to such enormous proportions that any figures given to-day would be wrong to-morrow.

The real secret of the success in seal dyeing will never be given to the world. It is held by only two firms, the London firm, who have made the success of seal dyeing for 150 years — ever since Cook's returned voyageurs round the globe brought back seals and sea otters to the fur market — and two members of that firm, who came to St. Louis with the process, when the American Government began selling the U. S. seals at St. Louis fur auctions. It is over the use of this secret London process that the lawsuit is now in the U. S. Courts; and it would be superfluous to register any opinion on that lawsuit till the Supreme Court gives its decision. Certainly, American fur traders are not going to ship American Government owned furs to Europe to be dressed and then pay for their reshipment back to the United States in dressed and manufactured form. Canada has always felt aggrieved over the award on pelagic sealing; but while lovers of wild life may not approve of the legality of the decision, if pelagic sealing had not been stopped, seal life would have been exterminated as sea otter life has almost been. Pelagic sealing was a cruelty unspeakable; for when heavy fogs lay over the Seal Islands, poachers of every nationality — Japanese, American, Canadian, South American — scooted in and massacred seals on the Islands, killing old and young, mothers and pups and unborn pups. Slaying was done so hurriedly and cruelly, that many seals were not dead when they were flayed; and the only way to stop the poaching was to stop pelagic sealing.

The fact that seal life is coming back to normal production justifies the law, however foolish it is in many respects; and for a full fair discussion of the imperfections of the law there is no better authority than Dr. Barton Warren Evermann of the California Academy of Sciences, himself an American, who is at least in sympathy with the American contentions.

Seal fur in its native form is a dark grizzled red gray, with the under fur tinged deep red. The over hairs, or whisker hairs, are very long, which protects the pelage. The hairs are a dirty, greasy mass. The pelt must first be blubbered and washed in warm water. It is then stretched on hooks and dried in blasts of hot air. It must be soaked to loosen the long hairs. The top hairs are removed by a blunt knife. The skins must be warm for this process. When the rough hairs have been plucked, the pelage is left a dark drab. The pelts are then tubbed and shaved. This process so far requires three months. The pelts are then pasted together back to back. Over holes in the fur — eye holes, etc. — brown paper is fastened to prevent the dye staining the pelt. A ground coat of dye is then applied. This application used to be trodden in, applied cold. From 9 to 14 coats are then brushed into the fur, before the final beautiful brown lustre is applied.

The seal is dipped to darken the top; and it is for this dip the dyers of England were celebrated. The dyeing process requires from six weeks to two months; and the art is a trade secret.

I do not know the order in which the various processes are applied; but the skins are cleaned in revolving drums filled with sawdust. They are beaten, trimmed and sorted. All edgings taken off are used for trimmings, capes and felting. Belly fur spoiled by wear and rubbing on the rocks is used in the same way.

Hair and harp seals taken off the coast of Newfoundland and Labrador were formerly used only for oil and coarsest leather. Of late, they have come on the market as fur, the baby white seals resembling a spotted leopard skin, only a light, almost bluish sea gray. They are not in the same class of furs as Alaska seal, or

even Hudson seal, which is muskrat, but they are superior to near and electric seal, which is rabbit.

The great dyeing and dressing centre for squirrel has been Weissenfels, Germany, where it was supposed the natural clays and salts gave peculiar advantage to the 20 great dyeing firms there; but this supposition I again doubt, for American firms are doing the same dyeing to-day and doing it well. I rather suspect the supremacy of Germany in squirrel dressing arose from the fact that of 15,000,000 squirrels coming to world markets, more than three-fourths come from Russia; and the most of the buying was for European markets. It may be guessed, Germany will retain her ascendancy. One firm dyes as many as half a million squirrel. Tails are used for boas. Bellies are used for cheap linings, and backs for expensive linings in imitation of otter for men's coat collars and linings. The pretty matched coat linings for wraps come from this source.

From beaver, the over hairs are hand plucked. Skins must be soaked and a dull knife used on the skin side. Poor beaver is used dyed for sea otter and for felting. Perfect beaver is never dyed.

Muskrat dye is a long process. It is, indeed, both an American and a French process; for the house that developed muskrat dyeing first perfected the process in France. The black muskrat used to be used for expensive coat linings in imitation of otter. The muskrat pelt is stretched flat and cut square, by which it can always be detected. The old process was to clean the skins in warm water, scrape off all fat and flesh, and stretch the pelt fur side down. The pelt was then immersed in a solution of salt, alum, water and sulphuric acid, thickened with wheat bran and flour. When dried, the bran was shaken off and the pelt rolled and unrolled to soften. The tanning followed, a warm water pickle of wheat bran in slight ferment with salt and the skin immersed for a few hours. Ingredients of the pickles and the time set for each, I prefer not to give, for each dresser has his own methods, which he does not advertise.

Such hand methods were feasible for a few hundred thousand skins; but there are firms to-day handling 4,000,000 skins yearly; and this demanded newer machine processes by which dyeing plates to the number of 400,000 could each treat 10 skins; and here, what applies to muskrat handled in bulk quantities, also applies to rabbit handled in millions yearly. It was the handling of muskrat and rabbit in bulk quantities that put both furs on the market as imitation seals—muskrat as Hudson seal, rabbit or coney as near and electric seal; and as told in another section, while muskrat seal will outwear Alaska seal, rabbit seal will not, and ought never to be sold as “just as good” at a lower price. Neither rabbit, nor cat, the oily furs, will ever wear well as the crisp furs.

Modern dressing of these furs is by machine. Fleshing is by machine; and if too much flesh is taken off the skin, the fur falls out. The cleaning is done in vats with mahogany sawdust fine as flour and some gasoline. The finer furs are still tramped in the vats by naked feet to soften the harshness of the pelt; but a revolving drum kicks the fur soft and flexible; and the human feet do with bodily warmth what air and machinery cannot do. Automatic blowers fan the sawdust out. Shearing machines operated by electric power even the fur down to equal length; and all discard is used for hatting and felting. The machine cuts more evenly than any human hand. Ground dye gets the golden tint on the skin by which all dyed skins can be detected. Over 40,000 skins go into these dye vats at a time, which are whirled round and round with a sort of windmill motion. This gets the groundwork dyeing below the pelage. The skins then go in pure water and the damp skin is thinned over a rope or chain to get the moisture out with blasts of warm air as dryers. This air is kept at just exactly summer heat—90.

The unhairing machine is used on the muskrat, but not the rabbit. An absolutely even stub must be left. The stretching to give flexibility is done over a rope by hand. Comes next the dyeing work proper for the pelage. The top dye is black. This

can be put on by machine, or brushed in by hand. The machine can do 2000 skins, or the work of five men; and the use of the machine has been so furiously opposed by the unions that in at least one huge factory it has had to be given up. A machine will do 10,000 skins a day; but hand work only — two coats put in by brush as a woman dyes her hair — gives the final lustre. The pelts are then put on racks to dry.

Hand processes are still used to flesh, pickle, grease, soften, cleanse, shear (with aid of machine), stretch and get the stiff hairs out. The biggest houses handle easily by machinery 4,000,000 muskrats a year and 6,000,000 rabbits.

Unprime rabbits and unprime muskrats are not worth the expense of work and are used for felting and hatting.

Mole dyeing must all be done by hand. The skin is too fragile for quick machine work.

Broadtails can be done by machine, but the final lustre of lamb skin must be hand finished. In one firm, before broadtail dyeing was perfected, 20,000 skins were sacrificed to experiments in the laboratory. In all lamb skins, the aim is to leave the skin a bluish black.

Mole must be washed in soapy water and wrung dry and the dye always laid on so the edges match, but no two pieces of the mole-skin run the grain of the fur in the same direction. Best grade moles need not be dyed except at the edges.

It is only ten years since muskrat and rabbit dyeing were so perfected as to put these pelts on the market as desirable fur. Ten years more may witness processes so improved as to put Chinese goat on the market cheap as wool scarfs, or old-fashioned mitts. Meantime, enough has been told of dye processes to show why furs are furs and command commensurate prices in proportion to fur substitutes. All in all, from the record of ten years' improvement in dyeing, I am not afraid of such extermination of fur bearers as to put furs beyond the reach of all buyers except the rich; but I am impressed by the fact that any furs requiring from 1600 to 5600 hand processes should receive the care and preservation of fine diamonds.

CHAPTER VIII

FARMING MUSKRAT FOR FUR

IN considering the fur-bearing world, it is impossible to group the animal life according to the classifications of zoölogy. For instance, fisher, mink, kolinsky, otter — are scientifically relatives; but as to furs, fisher ranks up with the silver and cross fox; and otter ranks up with sea otter and beaver.

Muskrat is a relative of the mouse and the rat. Yet you never associate his pelt even with the mole. You rank him up with seal and mink. Badger and lynx are the soft fluffy furs. Yet the animals are aliens. Beaver and otter would seem to be brothers in aquatic life. Yet in the fur world, you think of beaver and nutrias as partners, the nutria a very junior partner, indeed. Squirrel, mole and chinchilla have not the remotest relation to one another scientifically. Yet their furs are a trio of the rare fragile peltries. I have never seen any system by which the zoölogical scientific classifications of the fur-bearing animals can be made to resemble the classifications of the animals as fur bearers.

Take the muskrat!

A few years ago, he wasn't exactly the outcast of the fur world. He was considered the sport of boys more than men. Yet I venture to say in a single year the muskrat to-day is bringing more money into the fur trade than the Alaska seal ever did in ten years. Consider the figures! At the present time, from 8 to 10 million muskrats are being yearly taken in Canada and the United States. When I was up on Cumberland Lake a few years ago, 10 to 15¢ was considered a fair price for muskrats and 25¢ high. Cumberland Lake

is the terminus of a 300 mile stretch of Saskatchewan River, which is pure swamp and muskeg — the ideal home of the muskrat because of the exhaustless supply of a bulbous reed, which grows higher than field corn for a width of 40 to 50 miles, where the ground is so damp the intrusion of foxes and wolves is impossible except in winter, when the muskrat is hidden in his burrow deep under the ice or in the dome of a house, through which the hard frost prevents fox or wolf burrowing. It is the ideal sheltered muskrat-preserve of the North forever, just as Delaware Bay is the ideal preserve of the muskrat on the Atlantic Coast. Ten years later, the muskrat was selling up at Cumberland Lake and at Norway House for 90¢, which prevailed to the opening of the War in 1914. Then came the perfections of American dyeing processes producing muskrats that could not be detected from Alaska seal. Last year, the muskrat sold at Cumberland Lake and at Norway House for \$5 a pelt. That figure would be too high an average for the 10 million muskrat pelts yearly taken in America. Well, put the figure at an average of \$2. You have a total of \$20,000,000. It is only a few years ago that America's entire fur trade did not equal \$20,000,000. Even when 100,000 seal pelts were coming out of Alaska in a year, valued undyed at \$10 as I found them in 1875, or \$30 as I found them in 1911-12-13, you have the entire output of Alaska seal in its best days not equal to a sixth the value of muskrat to-day. Muskrats sold at from 10 to 50¢ in 1907; at 80 to 85¢ in 1911; at \$1.25 in 1912; and jumped to \$5 and \$7 for perfect pelts in 1920.

Of all the fur-bearing animals, muskrats can be the most easily farmed; but they have not been farmed up to date because a little care of their natural runways produces all the trade can consume. Stock a marsh where the muskrat's natural food is plentiful; and nature will do the rest. A few years ago, boys hunted muskrat marshes without let or hindrance. To-day "ratting rights" are rented half to the owner, half to the trapper; and many a marsh owner along the Great Lakes, or Chesapeake Bay, has been surprised to find his swamp ground yielding him higher revenues than

his farm land. We may not call this muskrat farming, but it is; and everything is marketed except the tail; fur, flesh, musk bags bring their price. The fur goes for seal, the flesh for marsh hare, the musk bags for chemicals. In spring, the flesh is too musky for food; and as the muskrats' value is more appreciated, there will doubtless and should be clapped on certain closed seasons when the fur is not at its best.

One acre of marsh lands will furnish 50 rats a year without diminishing the future catch; and if these rodents are taken only when the fur is at its best and yield only \$2 each — the salt marshes are beating the best potato lands of Maine, or spring wheat lands of the North-west.

Furs may be furs; but there are times when they begin to look like diamonds.

Not more than 50 rat pairs should tenant an acre, as they fight viciously and devour their own wounded, which should appease the tender conscience of sentimentalists wearing muskrat coats. The water must be deep enough not to freeze to bottom. Mud thrown up to dredge deeper will be used by the rats to build; and the diet required consists of bulbous roots, wild rice, wild lilies, cat-tails, carrots, beets, turnips, apples, pumpkins, in fact any rat food. Two litters of rats come the first season, three every season afterwards; and the pups run 4 to 12 at a time. Taking these figures, you can do a problem in muskrats that will make you dizzy. You will find at the end of the third year very close to 1000 for a beginning of one pair; this is averaging the babies at 8 with ample food. Try it, putting each season in a separate column, and adding to your total the old couples. In the South, the litters seem to run 4 to 6. In the North, nature evidently provides more prolifically to counteract the cold, and litters run 8 to 20. Babies come 21 days after mating. The young are blind, naked and much more helpless than kittens, but as far as I have been able to observe, unless the mothers are excited, they are tender and protective with their young as a cat, or wild duck. At least I have seen a

curious old mother muskrat, following us not a paddle length from the canoe up in the Cumberland Lake region, go on with much the same antics to divert us from her burrow as a mother duck will when she "plays" broken wing till her bobbling babies can scuttle and dive.

The burrows are either along the banks of streams slightly above water level but entered under water, or in built-up nests in shallow water, the living quarters above the water line, the entrance below. Again and again, as we canoed through the muskrat lagoons of the Eastern Saskatchewan, a little whiskered head about the size of a large kitten would come up alongside our canoe with beady curious eye and a skinny tail, with the wiggle of a fish and the directing force of a rudder. I never could guess whether they came so close because they did not know the fear of human, or from sheer curiosity.

In raw state, the muskrat fur resembles raw beaver, but the muskrat is hardly a fourth the size of a beaver, and is always squarish shaped where the beaver is long. Northern skins are lightest in color, but thickest in fur. The darkest skins come from New Jersey, Delaware, Maryland, but it has been suggested this is because the Northern skins are taken in summer, when they are not prime, and the Southern skins in winter, when at their best. If this be so, there is a job for the game warden of the North; for this probably also explains why the long hairs of muskrat shed. Muskrat fur is both durable and cheap. Until the perfections in dyes, it was used for hatting and for linings. When beavered hats went out the call for muskrat fell off and the pelts fell to 10¢. Then came the dyes making it into an imitation seal; and values jumped up to \$5 and \$7. Will they stay at \$5 and \$7? Quien sabe? If you could answer that, you could make a fortune on a shoestring; but the most of traders who have attempted a fortune in muskrats on a shoestring in the last year have accumulated a good sized bankruptcy; for they were men who did not know skins, and paid as high for poor as good; and the trade refused to take such skins

off their hands. "Why should I pay \$5 for a skin, which I can't sell at 90¢ as fur?" an old buyer asked me. "If these skins had been taken in winter, they would have been all right; but they weren't; and we can use them only for discard and cheap imitations."

In the last half of the seventeen hundreds, muskrat sold yearly in London less than 75,000 skins. In the first half of the eighteen hundreds, the average went over 400,000. In the last half of the eighteen hundreds, the average jumped two millions and a half yearly. London sales to-day average 7,000,000 a year; and America's total catch — as told before — 10,000,000. When muskrat skins went to \$1 trappers gasped. When they went to \$5 and \$7, traders were dumb; and yet the fine skins were bought at that price by the trade; and the trade knew what it was doing. The formal processes of dressing muskrat have already been given. The Canadian Conservation Report recommends the following process for home dressing:

"The skin should always be thoroughly cleaned in warm water and all fat and superfluous flesh removed. It should then be immersed in a solution made of the following ingredients: Five gallons of cold soft water, 5 quarts wheat bran, 1 gill of salt, and 1 ounce of sulphuric acid. Allow the skin to soak in the liquid for four or five hours. If the hides have been previously salted, the salt should be excluded from the mixed solution. The skins are now ready for the tanning liquor; which is made in the following way: Into 5 gallons of warm soft water stir 1 peck of wheat bran and allow the mixture to stand in a warm room until fermentation takes place. Then add 3 pints of salt and stir until it is thoroughly dissolved. A pint of sulphuric acid should then be poured in gradually, after which the liquor is ready. Immerse the skins and let them soak for three or four hours. The process of fleshing follows. This consists of laying the skin, fur side down, over a smooth beam and working over the flesh side with a blunt fleshing tool. An old chopping knife or a tin candlestick forms an excellent substitute for the ordinary fleshing knife, and the process of rub-

bing should be continued until the skin becomes dry, when it will be found to be soft and pliable."

Some facts on farm returns: Near the Toledo Hunt Club, 5000 acres of marsh were left undisturbed for two years. In 1904, they were trapped for the benefit of the Club; 5000 were taken in January and sold at 25¢ each. The meat sold to canners at \$1 a dozen. Returns to-day at present prices, each reader can figure for himself.

Muskrat trapping in Maryland is confined to January 1 to March 15. Trappers have cleared on very small leaseholds from \$500 to \$900. Seven years ago, one marsh was bought for \$2700. It is yearly yielding 30 to 50% interest on a 50-50 lease. Another investor bought 40 acres for \$150. It has yielded from \$60 to \$100 a year. These figures were carefully investigated and compared by D. E. Lantz of the Department of Agriculture in 1910. What the returns are in the same areas to-day, it would be hard to give; for the trapper, himself, always answers, "Poor, very poor."

The full-grown muskrat is from 8 to 10 inches long, chubby and round, with a 6- to 10-inch slimy tail. He has in spring a pungent odor. His skin should be stretched inside out and for trade must be cut almost square. In the old days, the boy's sport was to go punting in the marshes and spear the muskrat by night. To-day, the nests are raided and the little rodents clubbed and shot. With values going up, the wastefulness of this method will have to be changed to protect the young and the litters; for don't forget that once three nations growled at one another in threats of war over the Alaska seal; and the catch of the little muskrat is to-day many times more valuable to the fur trade than the best catch of seal ever was.

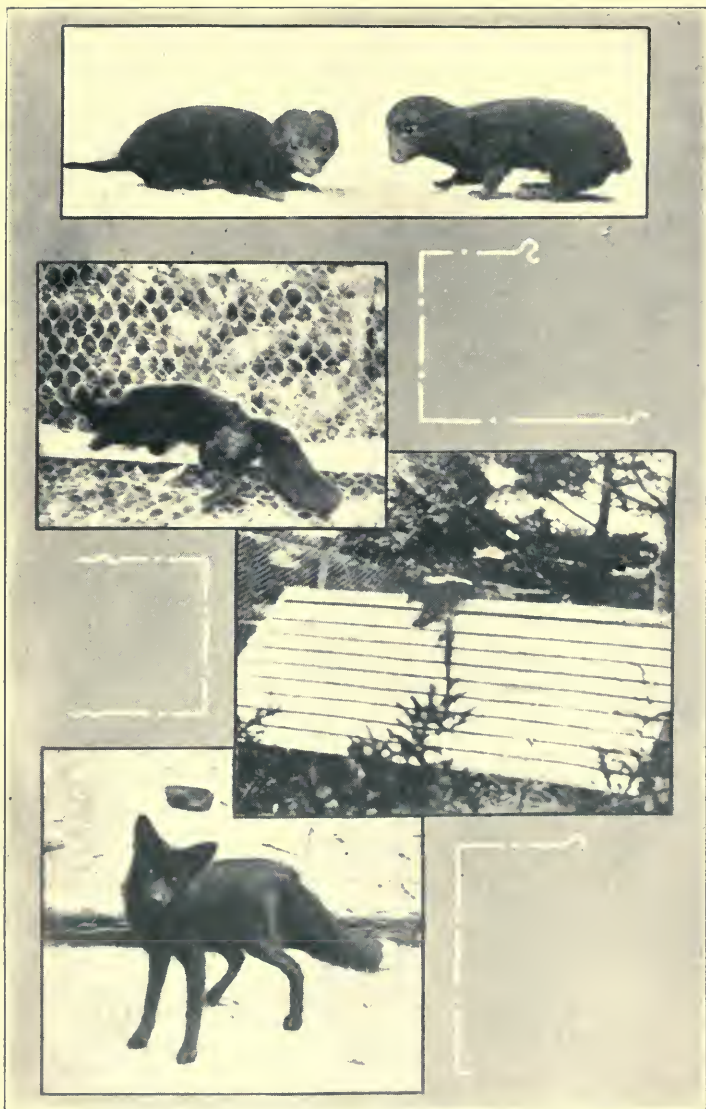
Owning and renting muskrat marshes can hardly be called fur farming; and yet if the muskrat marshes are protected not only by a closed season, when the fur is not prime, but by a state warden, who will do for them what Alaska game wardens are doing

for the blue fox and the seal, muskrat farming will easily produce aggregates that will make the silver fox totals look small. Muskrat will be to the fur world what the 10-cent store is to the high-priced exclusive shop — the fur of big turnover and enormous profits in small amounts, rather than a small turnover and moderate profits on a few big amounts.



Courtesy Gottlieb Company.

Red Fox Dyed for Silver Fox — Badger from Which the Silver Hairs
Are Glued in.



Courtesy Canadian Conservation Report.

Fur Farming in Prince Edward Island.

CHAPTER IX

THE RARE FURS OF THE WEASEL FAMILY

SABLE, MINK, MARTEN, KOLINSKY AND FISHER OR PEKAN

THE despised weasel family is the one branch of zoölogy, in which scientific classifications and fur classifications agree. The weasels are the bearers of rarest furs and for their size, the most expensive furs in the world; and all have more or less similar characteristics as to habits and furs.

Mink, Weasel and Marten, also Russian Sable and Japanese Kolinsky — all have long slender bodies, very short legs, flattened heads and lightning-quick furtive motion. To any one who finds a difficulty in retaining in memory the differences between the mink and the marten, apart from size and quality of fur, it helps to remember that the mink's motions are distinctly serpentine; the marten's are catty. The mink advances with a long pulling wriggle of a stealthy body, head uplifted to strike like a snake and shaped not unlike a snake. The marten is equally stealthy but leaps like a cat; and if you examine the shapes of the heads, you will see the marten head is more like a cat's or a fox's than a snake's. Otter, which also belongs to this family, but whose fur will be considered separately, and fisher or pekan, are five times the size of the little fur bearers and their heads are not unlike the seal's. Marten has a bushy tail that is priceless, so fine it is often sold separate from the fur. Fisher has a bushy beautiful tail like a fox; but it is never sold separate from the fur; but the mink and otter have nothing to boast of in their caudal appendage.

Russian sables only five to eight inches long sell all the way up to \$700 which is — inch for inch — many times the value of a silver fox. Hudson sable, which is nothing but American marten and ought never to be called sable, sold in the 1920 sales from \$201 in Montreal to \$460 in St. Louis, and from these prices averages for different grades ran at \$18, \$32.50, \$50, \$91. Fisher, which is much larger than marten or sable, brought \$125 in St. Louis, \$236 in New York, \$148 to \$345 in Montreal, while mink prices in the same sales rated from \$19 to \$75 and I think in one rare lot ran to \$90. (Incidentally, I may add that when camping some few years ago on the head waters of Bow River in the Rockies, I could have bought from the Indians the best mink that ever were “minked” at 90¢ a skin — which illustrates how much greater a gamble the fur trade is for tenderfeet than the wildest markets of Wall Street. It makes me physically sick to recall that early in the 1900’s when in Labrador, I could have bought the finest otter for \$10, which now sells at \$100 plus a pelt. Considering these prices and the advance in muskrat from 12¢ to \$7, it isn’t hard to explain why fur traders become rich or go stone-broke quicker than in almost any other industry except the finding of gold nuggets.)

“If,” says the Canadian Conservation Report of the weasel fur bearers, “this family could be domesticated there is no doubt that a market for more than \$10,000,000 worth of raw fur annually could be found.” This for Canada only. The absorptive power of the American market for these rare furs could not be overdone and would reach far beyond \$10,000,000.

All the weasel family are not water lovers. The marten and sable prefer rocks and trees; and the marten’s fur is always sleeker when he has had access to an abundant supply of raspberries, blueberries, wild cranberries and haws; but all the weasel except otter are blood-suckers and blood-drunkards.

Hornaday gives the annual crop of mink in America at 60,000, of pine marten at 120,000, of fishers at about 10,000. Brass estimates the world supply of mink as 600,000 from America; 20,000

THE RARE FURS OF THE WEASEL FAMILY 99

from Europe; 20,000 from Asia. The Canadian Conservation Report gives the Asiatic supply of sables at 75,000 annually; of American marten at 120,000. As a matter of financial record, 362,675 mink were exported from Canada in 1890. In 1918, 66,297 mink sold in New York and 110,000 in St. Louis. In 1920 spring sales, 160,000 mink sold at St. Louis and 7800 Russian sable and 22,500 marten; 21,941 mink sold in Montreal; 3400 marten; 109 Russian sable; 275 stone marten in New York, almost 14,000 marten.

I give those widely varying totals to illustrate the utter impossibility of keeping any census of rare furs under the present system. A high price such as ruled in 1920 for all the weasel family (except otter) brings out furs stored and waiting for a higher price for perhaps five years. A low price, or change in fashion, may relegate back to cold storage rooms minks and martens sorted and ready for sale; but however you regard these figures, they don't look like an exterminated weasel family.

Take the mink first; he is small, with a yellowish brown or dark brown fur. He prefers the banks of streams but can live the life of a landlubber, too. Birds, fish, mice, eggs are his favorite diet; but he kills for the sheer deviltry of killing; and Hornaday gives the depredations of one mink that killed six wild geese in one night and of another that slaughtered ten gulls. The murderer could not have sucked the blood of all these sleepers without bursting. One beautiful morning, I found on my lawn the little body of a beautiful red-breasted grosbeak. There was not a ruffle to the feathers. The little fellow had perished in his sleep and fallen to the ground. Then I looked closer. Right on the red of the breast was a puncture no larger than the lead of a lead pencil. He had been sucked to death as he slept. Another morning, I found a fine Plymouth Rock pullet with the same murderous knitting needle stab. Weasel family had been up to their midnight deviltries. My sympathies don't run out to the mink, when he is transformed into fur.

The mink is from 10 to 15 inches long. He is solitary. He is nocturnal. His hand is against all men, like Cain's, or rather against all creatures smaller, or more helpless than himself; and I never look in his murderous beady eyes without believing a bit in the transmigration of souls; for ultimately, he falls a victim to the stealthy ferocity by which he lives; and he looks to me like an evil spirit put in a corporal form, in which he must pursue his glut for blood to the blood-thirsty, but never-quenched, end. He mates in March and the young are brought forth six weeks later blind. The blindness lasts for five weeks and if the mother die and the little mink be placed to suckle with a foster mother, they will tear the milk ducts of a cat, and spit venom at a baby bottle, or ink dropper extemporized into a feeder. At eight weeks, they are weaned and go out on the quest of their own blood-thirsty trail. A male may have as many as five wives in his harem; and the kittens number 4 to 9.

The best mink pelts to-day come from Labrador, the North-eastern States, the Maritime Provinces, Hudson Bay, Alaska and the Rocky Mountains.

Best mink is brown, rather than yellow, and the pelage is thicker in colder countries and is one of the best wearing furs in the world. In all the weasel family, the deep over hairs are the chief beauty and give a lustre and gloss to the fur, which no dye can impart.

To the mink's body measurement of 8 to 12 inches should be added the tail of 6 to 8 inches. His tail is pretty but not the bushy flag of honor that the sable and the fisher can boast.

I have spoken of mink selling in the Rockies at 90 cents. In 1879, it sold in St. Louis at 40 cents.

In fur trade classifications, there are 10 varieties of mink in America; but these classifications are chiefly as to habitat, which determines the color and depth of the fur.

The European, or marsh mink, is not valued as highly as the American mink. Perfect mink fur is so dense, you can bury your hand in it, so soft if you shut your eyes you might mistake it for

down, and the over hairs are so shiny they defy dye. It is the darker strip down the back gives the mink garment its striped effect. The animal is not a striped coat fellow like the raccoon.

Can mink be farmed? It is said they can. There are hundreds of mink ranches in the United States and three-score in Canada alone; and the mink are undoubtedly kept in perfect health in captivity in parks and zoölogical gardens; but the fact remains up to the present, the commercial returns have not been such that they could be given to the public, or that they bulged the fur market, or that they bloated up a local bank account so that secret profits leaked out as in the case of the silver fox ranches.

Mink returns will probably be one of the steps forward in fur farming in the next ten years. Up to the present, mink farmers can make more money selling live stock than selling pelts; but with prices soaring as they have in 1920, live stock will have to turn itself into pelts, or the mink farming will not go on. It seems absurd that a mink kitten the size of your hand should sell at a higher price than a two-year-old Holstein heifer; and that is one of the things the fur trade will have to justify before mink farming goes on to success.

From mink farmers, who are at work to-day, these facts have been gleaned: Minks must be given an extensive range.

They must be near a creek.

Each family must be kept in a segregated pen, or they will take to the happy diversion of disembowelling one another.

The nests are about 16 inches by 16 inches, 6 inches high, placed in a box and hidden in a bank of earth. The males are given caves roofed with rock. Flesh and fish are ample diet. At the end of two months, mothers and young are put in separate pens. Six men can manage a mink ranch of 2000 females. I do not know how these figures have been worked out; for a mink ranch with 2000 females should be selling at least 10,000 mink a year and clearing up not far short of \$200,000 a year; and I do not know of any minkery for which such claims are even remotely made, though it is well

to remember one silver fox farm had cleaned up \$225,000 before nearest neighbors knew it was not a failure.

Male mink are very vicious and sometimes canine teeth have to be filed before they are admitted to their mates. The warning is issued by all mink ranchers *to wear mitts*, and to take the young away from the mothers at the 8th or 10th week, or one may have the blood-thirst awakened in him some night and slake it in the jugular vein of his mother or his brother. Oh, they are a nice domestic little bunch, the minks; and there is nothing so becoming in a mink to me as its apotheosis into a girl's collar. It is once the scalper's scalp can be worn with beauty, satisfaction and a sense of righteousness.

In summer, vary the diet with milk, bread and mush.

I do not know the *why* of it, but feeders all warn not to give salt in any form to mink.

Prices of breeders run from \$30 to \$200 a pair.

Next comes the kolinsky, which in the last ten years has become a favorite fur in America.

Kolinsky is not a false mink. It is simply a Siberian and Japanese mink, which has to be dyed because its native color is something between an orange and the shade of the yolk of an egg. It is known as "the red sable," "the Turkish sable" and "the golden sable." Its body is about 18 inches long and its tail is used for paint brushes. About 80,000 a year are trapped in Siberia. The Japanese kolinsky is a lighter yellow than the Siberian; and the tail of the kolinsky is much fuller than the tail of the American mink. The belly is light, almost white.

Only a few years ago, kolinsky skins sold at 32 cents. This spring, they sold at \$5 to \$7 in New York.

Dyed by hand, a good kolinsky can hardly be detected from Russian sable. It is a favorite lining for the Turkish trade, which explains why it is called "fire marten," or "Tartar sable." It is almost the size of the cat, 14 to 18 inches long, with a tail 4 to 8 inches; and the female is always larger than the male.

Kolinsky is nocturnal in habits. It climbs trees like the marten; robs nests, eats squirrels, birds, eggs, mice and berries. It is a great blood-drinker and hunts exactly like the cat, by furtive, stealthy approach, then a savage leap, with one strike of the sharp teeth into the brain or neck of the victim; and the poor, stupid, defenceless hare falls its victim just as it falls the victim to mink. I have often wondered if the souls of cowards are sent back for a period of probation to the bodies of rabbits and hares to be haunted by their own fears.

The first rage for kolinsky came to the United States when the War shut off European markets; but the fur combines utility with beauty to such a marked degree that I do not believe it will ever lose favor with the American market — especially as long as it sells at a sixth the price of minks and martens. It is a type of mink that seems to me all ready designed for coats; for it has to be dyed and cannot be sold undyed. Whereas, good marten and good mink should never be dyed; but if you match the stripes in coats and mantles, there must always be more or less dyeing; and to put \$30,000 in one garment comes very near being a fur, if not a game, hog. Every skin in a \$30,000 coat would have made a neck piece to vie with diamonds.

But it is when you are considering the sables and the martens that you are considering the royal family amid weasel furs. Sham aristocrats here have created as much confusion as sham aristocrats in the human world. Sable is sable and marten is marten and mink is mink; but to call one by the name of the other is only to confuse the public into a timidity of buying.

American marten is marten. It is never sable, though we call it American sable, or Hudson Bay sable.

The only true sable is the Russian sable.

The wild marten is just as blood-thirsty as the mink, but he can be tamed into a pet, which the mink never can. The marten is larger than the mink, and resembles a cat or fox more than a snake. He mates in January or February, and his young are born

in 3 months. They do not emerge to the world for 8 weeks and are full grown at 6 months. Hornaday describes the marten as an imitation young red fox about as large as a heavy cat. Its length is 24 inches, its tail 6 to 7 inches and its body dark brownish yellow or fawn. The legs are darker than the body. It loves timbered haunts and rocky burrows. It is not a chicken thief like the mink but it is a still hunter of birds, eggs, reptiles, mice, rats, with a great taste for berries, which improve the sheen of the fur. It is called the "pine marten" because it loves the forests of evergreens.

The pine marten is also known as the baum marten in Europe.

The stone marten has a white throat and a tail so fine it is kept to adorn mantles and capes. The stone marten is found all over Europe. Its fur is almost a purple brown with the belly side white, the throat pure white; and its fur has no yellowish cast whatever. The Canadian marten is a rich brown, almost black. Its under fur below the pelage is almost drab. The long hairs are darker than the thick even pelage. The throat is white. The tail tip may be white but is not always so. The best martens in Canada come from Labrador and the Rockies. Fur traders say they can tell the Canadian marten by the shade of the long over hairs, the white spots on the breast, the grayish ears, and the fact the fur is coarser and harsher than the Russian. At a wild guess, the yearly catch is about 90,000 in Canada, though these may all come on the market at once, or be held off for a rise in price, or change in style. The legs of Hudson Bay marten are tinged with white, of the Japanese martens with black.

Why should marten fur be so highly prized? It is not durable as otter, or rare as otter. Solely because of its sheer beauty and wearing qualities. The over hairs are so long and so uniform, they are deeper than the deepest fox over hairs. Their glisten imparts almost the sheen of a beautiful veil. Then the dark brown under pelage is soft as chinchilla and fine as down. Beneath that again is a lighter under fur fine as down. Well-marked skins need no dye. Only when matched in a cloak, must the stripes down the

back be blended by hand feathering. And note again, the marten is not a striped animal. The stripe in the coat is nothing but the beautiful dimple of darker, richer fur down the backbone.

And of the marten family, the Russian sable is the king. He is the smallest of the martens, too, small almost as a squirrel, 9 inches long and less with a tail 5 inches or less, very dark brown with a silvery sheen to his under hair and no spot of white on throat or legs. His habitat is Siberia. As high as £33 was cheap for a skin in London and to-day the price is near £100. Before the War, the normal catch used to be 25,000 annually, but just before the downfall of the Royal Government of Russia, the annual catch of Russian sable had been so falling off that the Government was planning for a closed season for some years. Steel traps were forbidden. Unprime sable furs were subject to confiscation; and all sable exports had to be tabulated in customs returns, where they could be inspected. It used to be said that a trapper in Siberia who had a successful run of sable for a single year could afford to retire a rich nabob. There is on record the case of one man "coming out" with 3000, whether caught by himself, traded from the Chuchees, or stolen — is not known; but on sale of his yearly catch, he retired. He had found his gold nugget in one season of three months.

The head of the Russian sable is almost a round ball. Including his tail, 18 inches is long for his measurement. His long over hairs are almost black. His nose is black, his ears gray. His chest and sides are deep chestnut brown. Under his throat, he wears a fur cravat of golden yellow. Second-grade Russian sable have white hairs among the long over blacks. A peculiar beauty of the long over hairs is they turn equally in every direction and so never acquire that "catty licked" look common to kolinsky. They look like the hairs on a creature that is alive. The tips of the over hairs are darkest, and the under fur is so thick it can hardly be blown open. The finest Russian sable like the finest types of all rare furs comes from the wooded areas of pine, poplar, willow. Russian sable from cedar forests is a lighter color; but that may be

because cedar grows best in a slightly swampy soil; and though the sable is a weasel, like the mink, he does not frequent streams. He prefers the rocks and the trees.

Sable are found far south as China and far west as the Ural Mountains, and thrive best in Siberia and Kamchatka. Kamchatka used to pay its taxes to the imperial treasury in sable skins. Over 80 skins a winter was not an abnormal catch for a good trapper.

The Russian sable nests in rocky burrows and hollow trees with moss and leaves to line his house. The young are born in spring in litters of 3 to 5, so it ought not to be impossible to multiply the sable if he could be domesticated. His diet is rabbit, birds, eggs, berries and — like all the weasels — fresh blood. He is a night hunter and such a heavy day sleeper that he can be taken out of his nest without alarming him. He hunts with almost the same antics as the domestic cat.

Of late years, guns are never used on the sable, only snares and box traps that cannot injure the fur. The trapping season is from October to November.

In the fur trade are 16 classifications of Russian sable, according to the district from which they come. For instance, Kamchatka sable have silver hairs, cedar sable, yellow hairs, and so on.

Before the War, one Russian fur farmer was experimenting with sable; but nothing has come out to the trade of his results.

Pekan, or fisher, and otter, are the largest of the weasels coming on the market as furs. I am aware wolverine, skunk and badger are scientifically classified in the same family; but as fur, they are not to be considered in the same breath as the minks, the martens and the sables.

Otter will be dealt with in connection with sea otter; but among the high-priced weasel furs, fisher or pekan ranks as a sort of Black Douglas, not as costly and rare as the tiny sable, but a magnificent black-coated fellow, the largest of the fur weasels and such a veritable snob, he associates his fur with no other fur, but is done up in unique one-piece goods, incapable of imitation and unless brown-

tinged in his pelt, unneedful of dyes. He is handsome, bold, a tree climber, a hunter, a fighter and a robber baron of all other animals' stores and baits. He eats fish, flesh, herring, mice, rabbits, squirrels, birds, snakes, eggs, frogs, toads, moles. He can live in a marsh, or he can live next door to the marmot — whom he will eat — in a rocky burrow, or he will climb up and take his day sleep in a tree. He ranges from New York to the Pacific Coast far north as Alaska. Yet it is seldom more than 10,000 of this long black snaky deep furred fellow are taken in America in a year. His length is given as 24 inches in body with a 14- to 18-inch tail, which he curls round his toes for warmth.

Fishers, or pekans, are always favorites of the fur trader and will be to the end of time. They are the biggest and most durable — except otter — of all the weasel furs. They are known as "black marten," "pennant marten," "cat marten"; and they are true martens in all but color, which is a jet black, or black brown.

I find less known of the fisher's habits than any other fur bearer; and I can recall having seen only one in wild life — and it was a vanishing black streak making from a pond for the woods.

Can the weasel family be fur farmed?

After the record in silver fox, I should not like to answer that. The next ten years will answer the question.

Mr. Ned Dearborn, Assistant Biologist of the Bureau in Washington, gives the following facts as to the weasel fur bearers:

"The Marten's size is about twice that of minks. The fur which is very soft, somewhat resembling that of foxes, is about 1½ inches long when prime. The color varies, individually, from pale gray to orange brown and dark brown.

"The color of fishers varies from grayish brown to nearly black. The fur when fully developed measures about 2½ inches in length.

"The cost of installing and stocking a mink or skunk ranch is comparatively small, depending somewhat on location. Material for a single pen for either of these animals can be bought for about \$2. Minks (live), usually sell at from \$8 to \$12 each and skunks

at from \$2 to \$8, according to quality. Minks and de-scented skunks can be kept in an ordinary back yard provided it is partially shaded.

"If one wishes to dress his own furs the following recipe for a tanning liquor may be used, but time and patience are required to produce soft, pliable skins, as the process is largely one of manipulation: To each gallon of water add one quart of salt and a half ounce of sulphuric acid. This mixture should not be kept in a metal container. Thin skins are tanned by this liquor in one day; heavy skins must remain in it longer, and will not be harmed if left in it indefinitely. When removed they are washed several times in soapy water, wrung as dry as possible and then rubbed on the flesh side with a cake of hard soap. They are then folded in the middle, hung lengthwise over a line, hair side out and left to dry. When both surfaces are barely dry and the interior is still moist they are laid over a smooth rounded board and scraped on the flesh side with the edge of a worn flat file or a similar blunt-edged tool. In this way an inner layer is removed and the skins become pearly white in color. They are then stretched, rubbed, and twisted until quite dry. If parts of a skin are still hard and stiff, the soaping, drying and stretching process is repeated until the entire skin is soft. Fresh butter or other animal fat worked into skins while warm and then worked out again in dry hardwood sawdust, or extracted by a hasty bath in gasoline, increases their softness."

CHAPTER X

SEA OTTER AND LAND OTTER

ZOÖLOGICALLY they may not be related but as to furs and habits they are, the Sea Otter, the king of all fur-bearing animals of the sea, now all but extinct, and the Land Otter, whose fur stands at the head of the list for beauty and durability.

The Land Otter is as fond of water as the Sea Otter; but its habitat is the land, not the water. Its favorite food is fish. Its webbed feet carry it over swamp ground. Its pointed flat tail acts as rudder when swimming, and its little short legs act as motors when running over land. Differing from its lesser brothers of the weasel family, the Land Otter is neither a thief, nor a robber, neither a blood-sucker nor a wanton assassin. He is a night hunter, too, but no enemy of man and under care becomes a good-natured pet. In length the Land Otter is 3 to $3\frac{1}{2}$ feet with a tail about 16 inches long; and his ranging ground used to be from Florida to Alaska; but settlement has drained his old time solitary ponds; and the Otter to-day is rarely trapped in the South, the best pelts now coming from Labrador, Athabasca, the Rocky Mountains and Alaska. Ten years ago, the catch of Land Otter for America used to run at 30,000 a year. To-day, I should be surprised if the catch ever exceeded 10,000. In only 1904, a Land Otter pelt sold for \$20; and the price was considered high. In the Montreal sale of 1920, Labrador Otter sold for \$100 plus. Labrador and Kamchatka Otter rank as the best in the fur trade; and the two best markets for Otter skins were in Russia and Canada. Owing to the demoralization of Russia by the War, that market has been cut

off. Yet Otter prices have moved up to \$100 plus. In the South, the Otter has already been exterminated. In the North, I doubt if he will ever be; for he is a lover of solitary places and has instinct, cunning and dexterity to match against the man hunter.

It has always been a matter of amazement to me that the American markets have not had greater demand for Otter. The reasons for this are many. The fur is a heavier pelage than the American climate requires; and while it is exquisitely beautiful, it is not a showy fur. The best Otter on the American market is seen in men's overcoat collars. Much of the Otter fur done up as women's coats is the plucked Otter siding or rubbed belly fur, which has been discarded and dyed to imitate beaver or seal. The true Otter is undyed, a deep glostering, shiny brown, almost black in the best pelts, with rough over hairs, which are often but ought never to be cut down, and a fur proper thicker than any other fur on the market. Indeed, the fur below the long hairs is almost impenetrable. Beneath this is another downy fur, which is dyed to imitate seal and beaver.

Undyed Otter has long over hairs a shade darker than the next layer of thick fur. That is — if the under fur is brown, the long hairs will be a darker brown. If the under fur is almost black the over hair will be black with a brown tinge; and below these layers is another fur, which is used for imitations. To me, there is no equal to it in the world for combined utility and beauty and durability in all weather, wet or dry, sunny or cloudy, raw or penetrating frost. In weight, it is heavy to carry. It is also expensive, too expensive for a climate where you wear a fur coat for only two months of the year; but in Canada and Russia, Otter can be worn as a coat by day for five months of the year and as an evening wrap for a lifetime. It does not cost as much as mink, marten, sable, chinchilla, mole; but it ranks up next to these expensive furs. I may say in all the fourteen or fifteen years I have lived in the United States, I have never seen an Otter coat which had not something which a Canadian or Russian would reject. Either it was

the belly and side fur plucked and dyed to imitate beaver or seal, with the real unplucked otter for collar and cuffs; or it had been silvered by chemicals to imitate Russian sable, which must certainly weaken the pelt, made it an imitation of a true fur and brought the price up close to the cost of marten or mink. Also those silvered pelts were of very small animals; and when the combination of a small pelt and chemicals is found though you may be told it "looks just like marten with the stripe left out" — look out for unprime fur doctored. Prime Otter is dark as seal, deep as fox, tough as buffalo, and rich as mahogany.

I quote the Canadian Conservation Report:

"Full-grown Canadian otters are about 4 feet in total length and weigh approximately 20 to 30 pounds. Their striking characteristics are long, lithe bodies, tapering into long, muscular, flattened tails; very short legs, fully webbed hind feet; short ears, keen little eyes and a beautiful coat of dense, dark brown fur. They are weasel-like in their quickness, extremely muscular and, for their size, fearless and savage fighters.

"Many kinds of otter occur in different parts of the world, but the largest and most valuable for fur are those of North America, *Lutra Canadensis*, and its several closely related sub-species or geographic varieties. Considering their wide range from Labrador to Alaska and from near the Arctic coast to Florida and Arizona, they show surprisingly little variation in size or in color or quality of fur. This is, of course, owing to their aquatic habits and to the nearly uniform temperature of water in winter over almost the whole continent.

"For breeding purposes otters with the most valuable coats should be selected, preferably the very dark individuals from Eastern Canada, Labrador, Newfoundland or Maine. Considerable individual variation is shown and the grade of fur could doubtless be steadily improved by selective breeding. The largest individuals are from Alaska and the Northwest, but the skins of these are less valuable than those of the smaller and darker animals of

the Northeast. The highest quotations are always for skins from Canada and the Eastern United States.

"The prime requisite for success in raising any fur-bearing animals is a thorough knowledge of their habits, especially breeding and food habits. The following notes are offered as suggestions in conducting experiments with otters :

"Otters are semi-aquatic, are powerful and rapid swimmers, able to stay under water for a considerable time in pursuit of prey or in escaping from enemies, but they are well adapted to dry land. They make long journeys overland from one stream to another and especially delight in travelling over soft snow, on which they run and slide on their silky bellies with apparent enjoyment. On freshly fallen snow or wet snow they often prefer this method of travelling and will follow the banks of a stream for miles ; but the greater part of their travelling is in the water where most of their food is procured. The long flattened tail is a powerful propeller and the large webbed hind feet give additional paddle surface for easy and rapid progress through the water. While on dry land their motions are comparatively slow and awkward ; in the water they are rapid, lithe and seal-like, almost as easy and graceful and even more rapid than those of many fish. Fish are pursued and caught apparently in fair chase and with great ease, though it is perhaps not safe to say, that all kinds are an easy prey. Otters seem to be about equally active night or day, but most so in the morning and evening hours."

In 1918, shipments of Land Otter from Alaska totalled 1647. Of the 1613 sold in the spring auctions of New York in 1920 prices ran from \$7 to \$66 — \$7 being for unprime, which ought to be a crime. Of the 4800 sold in St. Louis in the spring sales, prices ran about the same as in New York but not so high as in Montreal, because the best Otter in the world come direct to Montreal from Labrador. London's spring sales numbered about 5400 Land Otter, which it may be guessed came from the Canadian market. The 12,000 sold in these spring sales would represent about a third of



Blue Fox of Pribilofs, Alaska.



Karakul Lamb on Dr. Young's Ranch, Kerman, California — Note Tight
Curls of Same Size.

the world's yearly catch in Otter; and with prices off owing to the close of the Russian buying market, prices are not likely to go higher, which is a good thing for one of the rarest and most beautiful of the Canadian and Russian furs. It seems almost a pity that some government fur farm for Land Otter cannot be set up now, when breeding stock is plentiful enough to begin well, either in Alaska, or Labrador, or British Columbia, to do for the Land Otter what the U. S. Government has done for the Alaska seal, or the Canadian Government for the buffalo, or the Prince Edward Island ranchers for the silver fox. Nothing can ever take the place of Land Otter as a fur. It could be multiplied now into a great staple of the rare furs in the same class as Persian lamb and Alaska seal; and now is the time to do it and not when it reaches the status of the Sea Otter.

For trade purposes, Land Otter is classified in several varieties, chiefly as to habitat. Darkest fur is from the region of East Main in Western Labrador; largest pelts from British Columbia; thickest fur from Alaska, etc. Ten such land specimens are so classified. Then come classification as to quality and three sortings as to size.

When you come to Sea Otter, you are dealing with one of the tragedies of the fur world — a fur rare and beautiful as the finest jewel, durable as shoe leather, and plentiful almost as the sands of the sea, reduced so close to extermination that what sold in the hundreds of thousands a century ago, 2369 in 1891, yielded all told in 1912 only 202 pelts, in 1920, only 7 pelts for sale in St. Louis and 3 in New York and 15 in London. Prices for Sea Otter used to run from \$500 to \$1000. Prices this year, when the pelts were not of first grade, two or three having been taken from bodies found dead off the islands of Alaska, ran from \$1700 in St. Louis to \$2000 a pelt in London.

To-day a white man may not kill a Sea Otter under penalty of \$500. Native Aleuts only are permitted to hunt them; but the danger is that remedies have come too late as in the case of the extermination of the beautiful wood pigeon. Fur farming except

in its native habitat of Alaska will not help; for Sea Otters in captivity like seals in captivity are subject to pneumonia; and its wide range from Southern Polar Seas to Northern Polar Seas renders treaty protection such as saved the Alaska seal almost impossible. It looks to-day as if five years would see the last Sea Otter taken from the wild Northern ocean waves, where it cradled for so many centuries. Two factors sealed the Sea Otter's doom. When Russia decided to sell Alaska, which she did many years before the United States bought the Territory — in fact, Sir George Simpson, Governor of the Hudson's Bay Company, had considered such purchase away back between 1826 and 1838 — she turned her Aleut hunters loose to hunt to the point of leaving only an empty shell for the next owners of the country. Then came the perfection of long-range firearms; and the Sea Otter herd quickly disappeared before the world awakened to the loss.

It is one of the great tragedies of the fur world; and the finding of the Sea Otter and the hunting of it are two of the most romantic pages in American history. First, the Sea Otter, itself, as Hornaday and Elliot say, is "a child of the ocean." It is born at sea in a seaweed bed called "kelp." It is rocked on the waves. It plays in the sea. It sleeps in the sea. It floats or submerges, coming up only at intervals to breathe. It was formerly found from Lower California to Bering Sea. It is now found only as a rarity, or freak. Hornaday gives the measurement as $3\frac{1}{2}$ to 4 feet with tail 11 inches long; but a full-grown Sea Otter was larger than a man is tall. The coveted fur is dense with over hair and denser in pelage. It is finer in texture than Land Otter, shimmering and lustrous as light on water, black in color with a tinge of purplish silver like the light on the sea.

It was always the favorite fur of the Chinese mandarins and speedily became the fashionable fur of the Russian nobility. The story is romantic.

When Vitus Bering's castaways looked about on the barren islands, where they were marooned for the winter of 1741, they found

the swampy, weedy salt marshes of surf and rock alive with a medium-sized animal, for which the Russians knew no other name but "sea beaver." Mad with hunger, the desperate sailors fell on the kelp beds, clubbing right and left. The Sea Otter did not know enough to be afraid and fell easy victims. Seizing the raw flesh for food, the castaways used the pelts for clothing, blankets, rugs in their sand caves. Like "Cæsar's brains," Sea Otter was now used to chink the cracks of huts and keep out the cold. When in spring the sailors rigged up a crazy skiff to return to Asiatic shores, they carried with them a thousand peltries; and to their amazement they found that Chinese merchants would pay for these skins what in modern money would be \$150 to \$200.

Henceforth, Sea Otter hunting became a gold stampede; and to it rushed such riff-raff as always follow the lode-star of quick fortune by a gamble. All the capital needed was a boat and food for six-months hunt; and this, merchants of Russia were easily persuaded to advance on shares to any leader who would take out a company of hunters. Young Russian noblemen saw a chance to make easy money as the young French nobility had with beaver. They did not go out with hunters, themselves, but they obtained royal concessions or licenses on shares for merchants, who would outfit companies of riff-raff criminals and adventurers for the hunt.

When Captain Cook's crews came to the Pacific thirty years later, they, too, obtained skins in barter for beads and baubles, which they afterwards sold in China for a fortune. Just as the little beaver led exploration up the St. Lawrence to the Pacific and the Arctic, so now the Sable and the Sea Otter lured the adventurers of Europe eastward across Siberia and round the world in exploration of the Pacific Coast of America.

Of the fur, itself, the great beauty consisted in its ebony shimmer, interspersed with silver. Six feet the pelt measured from tip to tail. The face was beaver shaped. The teeth were like a cat. The feet were webbed. Only one pup was born at a time, and it was "cradled in the deep, sleeping on its back in the water,"

or tossing up seaweed in play, or going ashore among the rocks to arrange its hair like a cat. It had to come above water to breathe and when the weather was stormy, it had to come ashore to sleep. Its favorite sleeping bed was the kelp, where it could bury its head and think itself hidden.

Storms and gales drove it ashore; so storms and gales, day or night, were the seasons for hunting. It was the wildest page in the history of the American fur trade and I have told it elsewhere in "Vikings of the Pacific" and "Conquest of the Great North West." Some 5000 pelts a year were an easy catch for each of several of the Aleutian Islands. Multiply that by \$100 to \$200 a pelt, and you will see what profit there was for partners, what incentive there was to bludgeon the Aleut hunter into a slave without pay for the Russian, and what motive there was in turn for the Aleut to turn and slit his criminal master's throat.

To-day, Sea Otter rookeries are more jealously guarded than diamonds. Only there are no more Sea Otter on the rookeries of the Aleutian and Bering Sea Islands. Only an occasional Sea Otter carcass is washed up dead, or an Indian comes in with an odd pelt, which he does not recognize. To-day, the whole world sells, perhaps 3, perhaps 20. Ten years ago, the catch was 200; and Sea Otter might have been saved. To-day, it is almost too late. Unless Sea Otter rookeries are found in Southern Polar Seas of which the world does not know, Sea Otter are lost forever to the fur world and to natural history.

When malcontents denounce the pelagic sealing award, they should think of the Sea Otter. Had the Sea Otter been protected by international treaty at the time the Seal was, the Sea Otter might have been saved and might have come back.

What was the catch of the Sea Otter in its best days? Portlock and Dixon's cargo sold for \$50,000. In 1785, 5000 sea otter were sold in China for \$160,000. Two hundred thousand sea otter were taken by the Russians in 50 years. In 1875, American companies newly come on the hunting ground were taking 3000 a year.

Kadiak was credited with 6000 a year, Oonalaska with 3000, the Commander Islands with about 5000.

And so while an optimist may deprecate the possibility of high prices exterminating certain types of fur-bearing wild life, Sea Otter is an argument on the other side for fur farming, game preserves, closed seasons and international treaty to conserve any fur depleting down to the point of exhaustion.

CHAPTER XI

BEAVER AND NUTRIA

BEAVER and nutria are no relation in the animal kingdom. Yet they are brothers in the fur world. The fur trader scouts the resemblance of the two furs; yet the average layman has to look twice to distinguish them, especially if both have seen a couple of seasons' wear and are a little faded and a little matted.

As bought new, they are easily distinguished. Beaver is a deep, thick, heavy fur. Nutria is a thick fur but is neither deep nor heavy. Beaver has a silvery gray lustre. Nutria is a sepia brown and has very little lustre. Both furs have been plucked of coarse over hair. Both have at first a tendency to curl or crisp; but beaver is always the silvery gray, nutria the sepia brown. Lastly and most important of all, beaver is never dyed. Therefore the skin below the pelage and down is white; and the down is bluish gray. Nutria is nearly always dyed. Therefore the skin below is golden, and the down fur below the pelage is sepia.

Both furs have their uses; beaver for cold weather, nutria for raw weather. Both furs mat in the damp and lose lustre. Beaver wears like buffalo hide. Nutria except as a trimming is not a durable fur; and the prices of these furs, whatever the whims of fashion, should never be nearer each other than one for the nutria and three for the beaver.

In fur-trade parlance, nutria may be described as the poor younger brother of the rich stronger beaver.

The beaver is a castor; the nutria, a poor little water rat of South America, like our muskrat of the North.

Beaver were formerly plentiful on every continent of the world. To-day, they are only park specimens in Europe; and the range of the beaver has decreased so in America, he is found only round the Great Lakes and Hudson Bay, in Labrador, in the hinterland of Northern Ontario, in Athabasca and British Columbia. The yearly catch used to be in the hundreds of thousands, when flotillas of Northern canoes came down the Ottawa in brigades and flooded Montreal and Quebec and all New France in coin of the realm — Beaver. To-day, the catch is given by Brass as 80,000 for America, 1000 for Asia, and a few park specimens for Europe.

What especially stimulated beaver hunting was the fact that the beaver pelt could be used for fur, the waste fur rubbed on belly and sides could be used for felts and hats, the tail was as great a delicacy on the banquet board as "bear's paws," the general flesh was preferred to game birds, and the castoreum sold for the perfume trade at \$12 to \$15 a pound. Presumably, the discard flesh could be fed to the dogs of the Northern dog trains; but every atom of beaver was minted into coin or profit.

In the old days the price of beaver ran from a few shillings to 32 shillings a pelt; but with 100,000 to 500,000 beaver peltries a year coming out by way of the St. Lawrence and Hudson Bay, and with money of three times greater purchasing value a century and two centuries ago than it has to-day — that yearly crop of beaver pelts was a veritable gold mine to the Hudson's Bay Company, who operated the fur realm of the Northern Sea, or to the French colonial governors, who operated inland from the St. Lawrence, north to Hudson Bay, west to the Mississippi and Rockies.

In 1907, the yearly catch was placed at about 80,000 skins. By 1912, it had decreased to about 17,000 skins. This decrease arose from several facts. Settlement had cut off the beaver's wide range and a closed season in at least two Canadian provinces had stopped all hunting of beaver. Also the whim of fashion had shifted from beaver to mink and fox. Miraculously, thanks to game lovers and faithful game wardens, beaver came back. It is in a healthy,

plentiful condition to-day; but that is no reason for relaxing game laws and permitting the cruel work of game hogs to slaughter out of season old and young, male and female.

In the 1916 New York auction sales, beaver sold at \$12.75. By 1920, the price was running \$15 to \$20 in the Montreal, New York and St. Louis sales — not so great an advance as in other furs; but beaver during the years of closed seasons went out of fashion; and it is to be hoped it will stay slightly out of fashion for the next ten years; till beaver are plentiful as in the opening of the 19th century. In the spring sales of 1920, 21,000 beaver were sold at St. Louis, 9902 at New York, 14,000 in London, and such a very large number in Montreal that they really represented more than one year's crop. But practically the spring of 1920 saw almost 80,000 beaver sold; and the spring sale is only one of three sales a year.

At the same auctions the sales of nutria ran 150,000 for St. Louis, 58,000 for New York, 20,500 for London. Nutria prices ran 50 cents to \$6.10, which is not far short of beaver values when you consider the relative size of the skins. In fact, on the base of size nutria went higher than beaver; for the size of the nutria is 16 to 19 inches with a tail of about 12 inches; while the size of the beaver is 3 to 4 feet. The size is, of course, another way to differentiate the two skins.

Beaver cannot be farmed in a domesticated sense. It requires too large ranging ground. It must be conserved and protected by closed seasons in large, well-stocked wild life parks, such as Algonquin Park, Ontario.

The beaver mates in its second year for life and in three months produces its young — 2 to 3 cubs. The food consists of all aquatic vegetables, the shoots of raspberries, the leaves of willows, aspens, poplars. It must have an abundance of vegetable food.

The engineering feats of the beaver have been magnified in works of fiction almost laughably, but in spite of errors as to facts, it would be hard to exaggerate the beaver's engineering ability.

When he selects a habitat, he builds a dam. He does this so he will have deep water for a retreat against enemies, especially in winter and time of drought. His entrance to his nest or house is always below water; but his dwelling is a shelf above the water line. When he begins to construct the dam, it is true he brings the soft clay and earth in his mouth for a foundation; but it is not true that he spans the clay down with his tail for a trowel. The only use he makes of his tail is as a rudder, when he swims, like the fish, and as a balance when he sits up to saw wood with his teeth, as a bird balances itself with its tail on a branch. Without the tail, the bird's heavy breast in front of the feet would topple it forward. If you doubt this, watch how fledglings cannot fly till they get the tail feathers, how a hen has difficulty keeping her balance on a roost when she is molting her tail feathers. Having patted down a layer of earth with his paws, the beaver goes ashore and cuts down young saplings. Cases are on record where he has cut saplings almost 12 inches in diameter. If possible, these saplings are so felled that they crash down where the dam is building. If they don't fall in the right place, the beaver hauls them over by his teeth. I don't know whether two beavers ever pull on the same haul, for I have never seen them do it; but I have seen saplings in a dam that required the strength of more than one beaver, and they have not been windfall. They may, however, have been afloat. For such tasks, nature has provided the beaver with long curved teeth, resembling more than anything else I know a pair of small garden rose-bush shears. I have a pair of such beaver teeth taken from a beaver trapped in Cumberland Lake region that would easily span the forearm of a man, or leg of a small horse. More earth, more sticks, more saplings complete the dam. The beaver then constructs his house with similar methods. If the colony grows, the dam will yearly grow with more workers, and the number of houses will increase till the stream or lake literally backs water and floods adjacent land. This happened in Algonquin Park, Ontario, during the closed years, till settlers outside the limits of

the park had to complain of flooded lands and the colonies of the beavers, themselves, spread outside the park; and whole families of Indians camped on the edge of the park to slaughter the rodents who ventured outside limits.

This illustrates the necessity of large and naturally appropriate ranging ground in any game preserve, or fur farm for beavers, and in view of the value of the fur to Canada's national income, I do not think too wide an area of wild lands can be set aside to preserve the beaver, not as a wild life specimen, but as a source of national income. The beaver works at night, but not being an eight-hour man, he begins work and can be seen at sunset. Fur bearers, as far as I have been able to observe them, abhor union hours, though they live in communities in peace and ask only laws to prevent their destruction. As far as each beaver is concerned, he is an individualist in his own house. Another point — if the current is strong, it is a fact the beaver curves his dam up stream. That is a pretty fine point for animal intelligence, whether you call it instinct, or thought. Beaver houses are from a few feet to 15 feet in diameter and five feet above water line. The muscles of the beaver's jaws are literally massive for his hard timber-sawing jobs — whether the result of centuries of selective survival of the fit and death of the weak, or so originally created — I don't know. His favorite timber for house building is poplar, cottonwood, willow, birch, young elm, box aspen — all soft woods. His feet are webbed or palmated as all aquatic fur bearers are. Beaver was coin of the realm for centuries in all Canada. Skins were not passed as coin, but values were computed in beaver skins. Until the '90's of the last century, the Hudson's Bay Company used to cut down its lead tea chests into round coins on which were stamped 1 B, $\frac{1}{2}$ B, $\frac{1}{4}$ B and the district from which issued — YF — EM — NH — York Factory, East Main, Norway House; and these coins passed as currency at all Company stores; but of this I have given a full account in another volume on the Hudson's Bay Company — "The Conquest of the Great North West."

Come now to nutria, whose fur is a little brother to beaver, though the nutria, himself, is no relation.

Nutria comes from South America, from a little rat known as the Coypu, somewhat resembling our own Northern muskrat. He, too, is aquatic. His fur, too, was first used for beaver hats and felting, till beaver became so scarce, the plucked nutria came on the market as a good substitute. Naturally, he is a delicate yellow brown, with a fine soft under fur. He grows well in captivity, becomes a great pet and can be bought for fur farming purposes at \$8 a pair. His favorite diet in domestic life is corn, stale bread, cabbages, maple leaves and wood.

His native range runs from Peru and Brazil to Patagonia; and best skins come from the temperate zones. His length is about 20 inches with a tail 9 inches; and the catch used to run from 300,000 to 500,000 skins a year. When Uruguay skins used to sell at 48 cents, Argentina South skins used to sell at \$3.50 to \$5, and these prices run in the United States trade from 50 cents for poor and small to \$6 for good and full sized.

Nutria resembles our Rocky Mountain marmot. The rough hairs are always plucked and under fur used to be sold dyed as "nutria seal." I doubt if this "nutria seal" ever equalled our "muskrat seal" and rather suspect it was unprime, faded fur, or side and belly fur rubbed by wear.

The kittens of the nutria run from 4 to 6 a family; and the fur will always be a favorite on the American market, where the climate does not demand as heavy a fur as beaver except for motor-ing, which has been one of the chief causes in restoring the heavy furs to favor. In a country, where of 8 million cars, at least a third are long-distance touring cars, the demand for heavy furs is bound to increase, just as improvement in highways permits the touring car to supplant the Pullman with its increasing scale of fares.

The increased use of touring cars is one reason why the American trade is bound to see increased demand for heavy furs. Look at the motor coats in the shop windows if you want to forecast

the need for farming and increasing the diminishing supply of heavy furs. When touring cars numbered only a few thousands, you could buy a good beaver coat for \$200 to \$300. That was in 1914. You can't buy the same coat to-day even with an increased supply of beaver, under \$500 to \$700; so when beaver prices fell off in 1920, the wise old traders, whose finances permitted it, put their best beaver pelts back in storage for future demand.

Size for size, beaver is to-day cheaper than nutria.

Nutria are trapped only from May to October, chiefly by the half-blood race of Gauchos in South America. The flesh like the beaver and the muskrat is prized for food.

CHAPTER XII

CONCERNING FUR SEALS

ONLY two types of Seals may be considered as fur bearers.

They are the Alaska Fur Seal and the Newfoundland or North Atlantic Harp Seal.

The Alaska Fur Seal is one of the rarest and most highly priced furs. The Harp Seal is one of the cheaper furs but recently seen on the American market, very becoming to children and people of fair complexion, with leather strength in the skin proper, but too recently on the market to say how durable the fur will prove in wear and tear. It should certainly prove as durable as Alaska Seal, which is essentially a fur for careful usage. The two furs can never possibly be mistaken for each other. Alaska Seal is a deep golden black brown. Harp Seal at time of writing is a light bluish gray fur in its natural color; and up to the present, it is an undyed fur; but any time, some new process may do for it what dyeing has done for the muskrat and rabbit — in which case, it will be up to Canada and Newfoundland to take such precautions to preserve Harp Seal life as the American Government has taken to preserve Alaska Seal life.

No doubt, for another generation at least, Canadians and Englishmen will resent the international treaty that forever ended pelagic, or deep-sea sealing. With that controversy, a book on the fur trade has nothing to say.

Technically, perhaps, legally, the contention of Canada, England and Japan may have justification. "Are not the high seas outside the three-mile zone, and especially outside the sixty-mile

zone, open and free to all the nations of the world?" they ask. Yes and no! They are if no evil is worked to the interests of the whole world. They are not, for instance, free to pirates and murderers. They are not open and free to a submarine that might go out as a robber of merchant ships conveying international gold settlements from one country to another.

But there is still another argument in the quiver of Canada. "Why," Canada might ask, "should we allow Hudson Bay to be an open free sea to all traders in whales and peltries from any nation in the world — when by international marine law Hudson Bay is not an open sea — why should we allow Hudson Bay to be an open sea to all comers, if we are ruled out of, not only the three-mile zone, but the sixty-mile zone, or for that matter the 6000 miles, where Alaska Seals are known to range for at least six months of the year? Especially, why are we to be forbidden to seal, if ships from South America can still hoist a South American flag and prey on seal life as soon as it becomes prolific enough for South American poachers to hoist South American flags and go into the game of piratical deep sea sealing?"

And to that last question, there is no answer. It is the great defect of the treaty stopping pelagic sealing that South American countries were not signatories to the treaty. Up to the present, the contingency has not arisen. When seals are once more prolific as when the American Government took over Alaska, that question will have to be answered; but we don't need to cross that bridge till we come to it.

The best answer to Canada's complaint is the simple fact of results. The stoppage of pelagic sealing has saved the Alaska Seal from the fate of the Sea Otter. It has saved the Alaska Seal from extermination.

Also I don't suppose the London dyers of seal will get over their grievance for another generation. "We perfected the most perfect seal dye ever devised. It could not be imitated or beaten. Came the War, and you lured our dyers away with this secret." Tech-

nically and legally, I suppose, that contention has its rights. The case will be decided by the courts soon; but the points interesting to the fur trade are these:

Sealing under the treaty is operated by the United States Government. You could not have these seal skins in any case. The United States is the greatest buyer of manufactured seal skins in the world. In the War, you had not the man-power to go on with your great dye works. We had. Why should we have let our U. S. Government-owned seals rot unused in warehouses, for lack of dyeing processes, which you could not use — especially as by treaty we pay you a royalty on all skins taken to make up your loss in pelagic sealing? Why should we ship raw skins to you to be sold at slaughter prices, when you could not dye, only to buy them back manufactured at excess prices? When seal life was prolific, seal coats sold in Hudson's Bay store in Winnipeg at retail prices of \$200 to \$300. Under the destruction of pelagic sealing, seal coats went up to \$1000 for poor, \$1800 for medium, \$2000 for good. If we can increase seal life to a plentiful supply, coats will again sell at \$200 to \$300. We are thinking of satisfying the demands of the trade. Under your method of procedure, you were totally destroying the trade, as the trade in Sea Otter has been totally destroyed.

One more point, when the argument is at its bitterest, keep in mind *it was not the American fur trader forced action in the treaty*. The trades stood back from the dispute. *The influence that forced action was the lover of wild life — the Camp Fire Club of New York*, which by a volunteer unpaid campaign of publicity aroused public opinion all over the world to the danger of exterminating all Alaska seal life. No American fur company had anything to do with that campaign of publicity and aroused public opinion; for the leases of the American company for the Fur Seal Islands had expired. They were no longer making enough to pay expenses; and the United States Government was spending millions on patrol boats that could not prevent killing outside the legal zone. More seal pups were dying every year of starvation from the killing of the

mothers by the poachers than either the poachers could total or the fur companies kill legally; and the poaching was done so cruelly and hurriedly that thousands of seals were flayed alive.

Keep that fact in mind, when the controversy comes up again, as up it will come just as soon as poachers hoist the flag of any South American nation, which was not a signatory to the treaty.

Now for the Alaska Fur Seal, itself!

It is short-necked, flat-bodied, low-lying, clumsy, ugly, with short front flippers and short hairy claws, and no external ears and an over hair short, close and of no fur value. It is the under pelage is the fur of the trade. Hornaday says the Fur Seal is not a true seal at all but a Sea Bear. Henry Elliot's book on the Fur Seal is the classic of Alaskan literature and should be read by all disputants; for Elliot made his survey thirty years before there was any controversy.

The Alaska Seal spends nine months of every year as a deep sea cruiser, circling from Alaska half-way down the Mid-Pacific, back inland towards California Coasts and then northward to the Aleutian Islands, where it bears its young. Why it chose the Fur Seal Islands of Alaska, Japan and Russia for its lying-in hospital — science does not know. The rookeries of two islands in Bering Sea are the favorite lying-in hospitals for bringing forth the young. The *why* of that is also absolutely unknown. The Seal of the Japanese and Russian Islands have not a pelt ranking high as the Alaskan. The *why* of that is also unknown.

The seal cruises the 6000-mile circuit without once touching lands which are not submerged. St. Paul and St. George of the Pribilofs are the great landing places. Hither come the seal the first fifteen days of May, regularly as the green warblers pass over the Eastern States to Hudson Bay, the first ten days in May. By September, the young are old enough to cruise. By November, not a seal is left on the Seal Islands. Mating occurs immediately after the birth of the young. Each male fights for a harem of six to ten ladies; and the fight is the cruelest thing in all the cruelties



Muskrat Raw and Plucked — Which Makes Hudson Seal — Once Worth 12¢ a Skin, Now \$5 to \$7; and Seven Million Skins a Year Are Used.



BEAVER
(stretched in hoop)



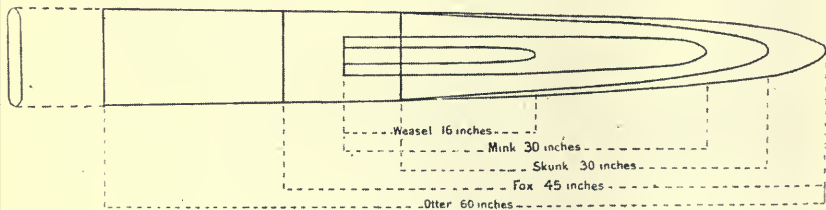
RACCOON
(cased)



MINK
(cased)



MUSKRAT
(cased)



STRETCHING BOARDS



STRETCHING BOARDS WITH CENTRE WEDGE

Courtesy Canadian Conservation Committee.

of fur life. Unless the superfluous "bachelors" are killed by the fur trader — I wish sentimentalists who rail against fur as vegetarians do against flesh diet would note well — unless the superfluous "bachelors" were killed, they would kill thousands of mothers and thousands of pups, literally pound them and bite them to death in the rough and tumble scrabble; so the aim of the fur trade in preserving seal life is to drive off these superfluous "bachelors" and despatch them painlessly as possible, leaving the mothers and pups in security and peace.

Obviously, poachers shooting at every seal head in sight could not distinguish mothers from "bachelors"; and every mother killed left a pup to perish — in fact, often left two pups to perish, for the two-year-old also needed his mother's care. Having borne her young on the naked rocks, the mother put to sea, leaving the youngsters sprawling in thousands. Coming back, she made straight for her own offspring and fed it. How did she know her own young from the thousands who were not hers? How does the sheep in a herd of 5000 know the bleat and smell of her own lamb? We have not begun to probe even the surface of knowledge of fur-bearing life.

When Henry Elliot made his survey of Seal Life in 1872-3, there were between three and four million seals on the two islands. When the Camp Fire Club called attention to the extinction of seals in 1910-11, there were fewer than 200,000 alive, of which only 80,000 were mothers, 1400 necessary bulls, 150 growing bulls, and the rest classified as "young."

Ten more years would have finished the Seals as these very years finished the Sea Otter.

Briefly as I can condense it, here is the history of the Alaska Seals.

The United States bought Alaska in 1867 for \$7,200,000.

The Russians had never been hunters of the seal.

In 1870, the Islands were leased to the Alaska Commercial Company for twenty years, only 100,000 young seals a year to be killed; rent \$317,500.

In 1872, the Alaska Company spent \$100,000 in cash to popularize Seal Fur in London. That was mistake the first. They ought to have popularized the fur in America.

By 1880, deep-sea sealing, or pelagic sealing, by means of long-range rifles fired from ships, was taking more seals than the Company, whose catch had fallen to 8400 a year.

By 1886, six foreign nations were engaged in pelagic sealing.

By 1890, the North American Company succeeded the Alaska Company as the renters of the Islands. The seal catch at sea numbered this year 40,000.

By 1891, the United States and England agreed — you recall the term “Modus Vivendi” — to close Bering Sea to the poachers; but that did not prevent the poachers hanging on the verge of the legal sixty-mile zone and potting the incoming and outgoing seals cruising.

By 1894, almost 62,000 seals were killed by the poachers.

In 1895, 30,000 pups perished of starvation and almost 60,000 seals were shot by eighty different vessels poaching. The number of seals legally killed was about 15,000. Hornaday says the cost of patrolling, which did nothing to preserve seals and could do nothing, had now totalled \$2,000,000. (See his figure 130 — *Natural History*, Vol. I, or Dr. Evermann’s Seal pamphlet of 1919.)

By 1898, all American citizens were forbidden pelagic sealing; so the poachers went to Japan and registered under the Japanese flag. Up to this period, there were more American poachers than Canadian.

By 1910–11, there were not 200,000 Fur Seals alive; but England had \$2,000,000 invested in Seal Dye works, which employed 3000 dye workers.

Getting complicated, wasn’t it? And the seals kept on perishing of starvation. Seal coats now cost \$2000. The raw pelts, ruined by promiscuous shooting and hurried, inexperienced skinning, were bringing only \$10 to \$40 each, when they ought to have been worth on the basis of retail price \$200 each. The Japanese poachers

now numbered thirty-five; but note — please — these were mostly Americans and Canadians under a Japanese flag.

The letter of the law was dead, and the spirit of the law was a joke.

Then the Camp Fire Club got busy. Seal articles appeared everywhere. Seal speeches became part of the great Conservation Propaganda in vogue in those years. I did not know I was a victim of that propaganda, but on looking up my files I find I wrote about seals exactly what a member of the great Revillons Fur Company had told me of the horrors of skinning seals alive; and I took their word because they were a French firm not involved financially to the extent of a centime. They showed me some Sea Otter they had bought that year; and predicted exactly what another ten years would do to Sea Otter. And their statement was only too true.

Resulted the international treaty stopping all pelagic sealing; and whatever the defects of that treaty, give it credit for saving the seal. The United States Government took over *all* sealing operations, on which Japan was to receive a royalty of 15 per cent on all proceeds, England 10 per cent. During completely closed seasons, England and Japan were to receive each \$10,000 a year. The pity is South American Governments were not signatories to that treaty; and the question is bound to erupt again; for Seal Life has been saved and has come back.

The Seal Herd in 1918 numbered 496,432 of which 285,000 are bearing mothers, about 5000 aged bulls, and the rest growing youngsters. By 1922, or 1926 at latest, it is calculated seal life will be producing more seal fur than in its palmiest days *without the loss of a mother or a pup*. The increase will now go ahead at a rate of compound interest, which explains why the trade is holding off a little from high prices for seal pelts. It is expected Alaska Seal will soon be selling at prices as cheap as its imitation. What the effect will be on the imitation trade is one of the technical points from which a layman shies back. The demand for Alaska Seal will always be so great, especially if stimulated by low prices, that I do

not believe there will ever be a glutted market; but the poachers under another flag will undoubtedly start up again.

Meantime the record of the Alaska Seal is a triumph for the preservation of fur-bearing life, and points the way how to preserve a supply of furs for a fur-hungry world.

The present classifications for Seal are :

	<i>Inches</i>
Wigs	Above 55
Extra extra large	49 to 55
Extra large	46 to 48
Large	43 to 45
Mediums	39 to 42
Small Mediums	35 to 38

A good many years ago when cruising the shores of Labrador and Newfoundland on a commission other than fur life I little dreamed that the Harp Seals floundering on the rocky coast in myriads with the plaintive whimper of a puppy dog, or crying child, would ever become a factor in fur.

The baby Harps were in those days captured in hundreds of thousands every spring for their blubber. Boats left Newfoundland in March, to spear the babies on the floating ice floes; and the tragedies of the spring Harp Seal hunt are a story in themselves, that would fill a book. I used to go out to the harbor of Kitty Viddy outside St. John's, Newfoundland, and listen to the thrilling yarns of old sealers who had been carried off by a floe separating from the other ice and drifted to sea, or whose steamer had been crushed by a backwash of ice in a Nor'-easter gale and gone down with all hands who did not escape to the ice. The story has been told again and again by the late Dr. Harvey, the great naturalist and discoverer of the great devil fish, and by Sir Patrick McGrath, both of whom I met on that trip and number as friends, whom it is good to remember. I heard the same story up at Greguet on the Straits of Belle Isle and off Battle Harbor, Labrador, where Strath-

cona of Hudson's Bay-fame spent his youth and where Dr. Grenfell to-day has transformed the lives of a whole suffering population of deep-sea fishermen.

Who of us then suspected the little Harp would ever be rated as a fur? Fur! Worthless! They laughed at my tenderfoot questions and pitied my ignorance. Yet last winter I saw Harp Seal coats on women who were leaders of fashion in Europe and America. I took tea last winter at the Colony Club, New York, with two Harp Seal coats; and as I listened to the chatter of fashion and fun, I kept hearing the sing of the wind in our mast off Labrador, the swish of backwash in an October storm, that had wrecked twelve fishing vessels, and the whimper, whimper, of the young Harps, who looked up at us from the desolate rocks.

The fur trade has moved at a swift pace in these intervening years.

The little spotted Harp easily yields Newfoundland a quarter of a million dollars a year, and if the fashion for Harp fur increases, he will yield more. I do not think the Harp will be easily exterminated; but it is up to Newfoundland to have a care. Who can say? He is amply protected by the danger of the quest in spring and the frightful mortality among the sailors; but that did not save the Sea Otter.

The baby Harp has a thick coat of thick, almost woolly fur, white as snow, soft as swan's down. This is shed within a few months and replaced by a bluish spotted hair fur. The fur is thick and the hide tough as shoe leather. He should be a good wearer. If he is, let Newfoundland be ten times more careful to forefend depletion. The Harp is now hunted only in spring. If he were hunted in summer, he would go the way of Sea Otter. Hunted he will never be in winter. The gales beating an iron coast of precipitous rock forfend against that; but summer hunting or hunting before the mother brings forth her young brings its own Nemesis; and that is the end of the fur.

CHAPTER XIII

THE OTHER GREAT STAPLE FURS. SKUNK, RACCOON, BADGER, WOLVERINE, CAT, COUGAR, LYNX, RED AND WHITE FOX, BEAR, WOLF, ERMINE, CHINCHILLA, MOLE, RABBIT, FITCH, OPOSSUM

WHILE the rare furs are so spectacular that they catch the public eye first, in the great volume of the world's fur trade, it is what might be called the lesser furs and the commoner furs that swell the aggregate and protect the most of people from cold weather.

Skunk

Skunk may truthfully be classified as both a common fur and one of the best furs of the trade.

For years, the public would not buy skunk as skunk. It had to be given such fake names as "black sable" to get it across to the trade. That day is past. The beauty of a perfect black skunk combined with the durability of the fur has increased it in public favor and sent prices up; and to-day skunk is skunk.

The catch of skunk in America alone is given as from 1,500,000 to 1,600,000; and the catch shows no signs of diminishing; and the demand could consume twice the catch. It is both trapped and farmed, the farming ventures being chiefly located in Wisconsin and Michigan and Prince Edward Island, from which the best pelts come, the trapped pelts coming from every part of America from the Southern Sections of Manitoba to the Rio Grande. As always with fur bearers, the finest fur comes from the North in proximity to fresh water, that seems to give sheen to the fur, and in wooded areas, which protect the lustre from fading.

The skunk mates in February or March and brings forth six to twelve young in May. The babies are blind for three weeks and mature in six months. The food consists of chickens, eggs, grass, herbs, crickets, rats, mice, lizards and worms, especially such worms as are harmful to vegetable gardens, like the army worm and cutworm, and wasps and hornets and all the hosts of creatures commonly called "varmints" in country parlance. I am aware that naturalists deny the skunk is a raider of poultry yards; but as a child living on a farm near Lake Huron, I defy any farmer to subscribe to the naturalist's dictum, especially if there are eggs and baby chicks. On the other hand, I am perfectly aware if the skunk has abundance of other food, he does a great deal more good than harm to a farm. He devours more mischief than he creates and will not turn on his obnoxious perfumery unless attacked by dogs or alarmed in his lair. I know he seeks to nest in colonies, where farmers object — in the bottoms of stacks and under loose boards in a shed or barn; and I have recollections of one such nest as almost drove us out of the house for a week, when a collie dog undertook to expel the intruder.

As many as twenty skunks are born of one family and that does not seem to indicate any shortened supply of the fur. At the same time, prices for skunk skins are now so high, that may give an extra incentive to trapping; and the fur farm promises the best way out for the fur trade. The farm should be located distant from neighbors owing to the odors; though a young skunk can be de-scented with little pain and no harm to himself. This process should be attempted only by an experienced veterinarian, or skunk farmer, and it is fully described in the bulletin of the Bureau of Biology, Washington. It is well to remember gasoline will deodorize "skunked" clothing, or burying the material in the earth for a few days, or chloride of lime will destroy the smell of a lair but will also destroy the fibre of clothing.

Though there are seventeen species of skunk, a general description covers all — the black pelt, jet black the best grade, with small

patches of white just behind the neck, a bushy tail from 12 inches to 18 inches long, a sharp nose, a little round body, prone sharp-nosed head and claws like knives. In science, the skunk is a weasel. In life, he is a relative of Cain, an outcast and pariah.

In the trade, skunks are graded first according to the white on his pelt. In grade II, the white stripe comes to the shoulders. In grade III, the long narrow stripe goes down the back. In grade IV, the white stripe is broad. The next grade is as to quality of fur and habitat; and it is a queer freak of nature that few skunks come from two of the best fur regions in America, where food is abundant — Alaska and Labrador. The next grading is as to large, medium, small. The highest grade pelt would run 1 foot to 18 inches long, with a bushy tail as long as the body.

The little spotted skunk is known as "the civet" and of this there are fourteen species.

Skunks do not readily climb trees, but they can. They do not swim, but are the prize burrowers next to badger and woodchuck, whose homes they often preëempt. Leaves and grass line the nests, and the burrows always have two entrances, which places the skunk somewhat in the class of the beaver for craft against foes. They undoubtedly know their own great power of self-defence; for I have been compelled to drive two miles behind a skunk on a woodland road for the simple reason, when I came within a rod of him, his tail went up and my horse refused to pass him. The spray emitted by the skunk will blind an enemy, like the fluid from the devil fish; and having sprayed his enemy, the skunk scuttles under cloud of the stench he has created.

In the old days, the price ran in London from 7 shillings to 10 shillings, and at that price, from 19,000 to 20,000 sold a year. Today, 2,000,000 skunk a year sell in London, though I am inclined to think these figures include the fitch, or polecat, of Europe, a smaller animal by at least six to eight inches. Skunk pelts in the 1920 American sales ran from \$5.90 to \$9.20 in New York, fitch from 12¢ to \$3.50.

The Cat Furs

At the top of cat furs stands the Canadian Lynx as to quality and price, the Cougar as to size and cheapness and inferior quality of the fur, with Bay Lynx, Bob Cat, Wild Cat and Domestic Cat as variations between in prices and quality of furs.

Canadian Lynx is easily the king of the cat furs.

He is an eater of rabbits, of gophers, of marmots, of fish, of flesh, of red herring. Everything edible is a filler for his hungry maw; but in a season when rabbits are scarce, Lynx skin is poor, which seems to prove that the hare and rabbit are his staple foods.

The best fur is a sort of pepper and salt gray or fawn cream 18 inches deep in hair and pelage. The pencilled ears and the huge padded fur feet are the marks of this denizen of the snowy wastes. In natural histories you will see the Lynx ranging ground given from Alaska to the Rio Grande. In the fur world, best Lynx are classified not farther South than Minnesota; and the best pelts come from Quebec, Ontario and the North to latitude 60. The Canadian Lynx full-grown measures closer to 4 feet than 3, and the weight runs over 20 pounds. He is a tree climber, but his scream and his big eyes in deeply furred head are much more terrifying than his prowess.

The lesser cat furs are from the Southern areas and are variously known as Bay Lynx, "Bob Cat" and Wild Cat. These all lack the pencilled fur of the ears and the huge fur-padded feet. They are smaller and their fur more spotted — so spotted in some smaller varieties that they are confused with the "civet" skunk and "civet" coon, to which they have no likeness or relationship whatever but in the smallness of size.

The belly fur of all the Lynx is used for boas and trimmings, because it is usually worn by climbing. Hudson Bay used to produce 40,000 Canadian Lynx a year; but this catch is falling off owing, perhaps, to depredations on the hare. The best fur is marked by silver and black tips to the long over hair. I am sorry to say it can be dyed to imitate finer fur; and this seems a pity; for Lynx

is a beautiful fur in itself undyed; and the prices justify Lynx being sold always as Lynx. In Montreal in 1920, 686 Lynx sold at an average of \$62 to \$45 for the various grades; in St. Louis, of \$51 for Northern Lynx, \$12 for Southern Lynx, and \$2.50 for plain wild cat; in New York, for \$50 for the best and \$1.50 for New England wild cat.

Cougar or Puma

The Cougar, or Rocky Mountain Lion, is a poor specimen of a lion and not a very reputable specimen of the cat. He is thin, slab-sided, long-bodied, low-set and not so large as the tiger or panther. Cornered he will fight; and in the days of old blunderbuss fire-arms with short range, that doubtless give rise to the weird stories of his terrors to pioneer settlers from Tennessee to the Rockies; but he is an arrant, blood-thirsty coward, preying only on creatures smaller than himself and indulging in such nasty wolf tricks as hanging on the herds of stockmen in the West to ham-string the calves and colts, of which I have known as many young as 10 to 18 to be mutilated by this stealthy beast of prey in a night, round Calgary district in its early ranching days. Its fur is shallow and suitable only for rugs; though the hide is tough as leather; and every cougar rug I have ever seen in a pioneer's shanty symbolized to me the lives of so many smaller fur bearers saved. Though I have heard the unearthly screams at night, the only cougar I have ever seen was many years ago in Okanogan Valley, British Columbia. I was staying at the home of the first settler in that valley. He had just set out the first orchard in that fruit country. It was sunset. We were going through the young orchard, when we noticed a slight movement amid the evergreens lining the orchard. Some young fawns the exact color of the yellowing frost-touched poplars were stealing shyly down to drink, when we became aware there was another watcher at the drinking pool — crouched prone, the shade of the withered grasses — a cougar of respectable size. Our fruit rancher motioned us not to move nor speak; but before he could

haul up his rifle, or motion his dog, the cougar leaped, not at the fawn, but in flight back to the woods, where, the family afterwards wrote to me, they heard his screaming for a night or two. He may be ignored as a fur bearer, though he is so classified. Forest rangers in the Rockies still get the cougar in the Upper Mountains and they classify them always as "varmints."

Domestic Cat

If your sympathies have ever gone out to the stray gutter cats left by city people every year to fend for themselves when the hegira takes place to the country and to summer resorts — rejoice! There are no more stray cats. The craze for summer furs and cheap furs has exterminated the gutter cat. It has also exterminated many a beautiful domestic tommy, who mysteriously disappears to the sheer joy and multitudinous increase of feathered songsters. I have an old acquaintance in New York, whose little shop I have patronized for years, drawn in the first place by the beautiful tortoise shell and black cats, which always sat sedately on his counter and came to me instinctively for petting. For the last year or two, I have missed his cats. He can keep only one, where he used to keep three.

"Where are your beautiful cats?" I asked.

"Yes," he answered. "You may well ask that." Then he swore in Spanish. "I can't keep one. I suspect if you look hard enough, you will find them round the necks of some of your friends dyed for fox."

And it is true.

The domestic cat is now a factor in the fur trade. More than three millions are used annually; and from my lawn this year, I hear more feathered songsters than I have known for ten years, singing a glad requiem to the cats. Blacks and browns are the favorites of the trade; and for the best Dutch cats, prices used to run 3*d* to 8 shillings. Silver grays are rare. All are dyed for imitation furs and in the spring sales of 1920, prices ran from \$1.15 to 55¢ and 15¢ according to grade.

Raccoons

Raccoons, as I have told in the account of dyeing and dressing, have recently come in high favor. In the '80's, the demands of the trade ran to 600,000 a year; but the trade to-day could use many more 'coons; and the 'coon is so easily domesticated, he is now farmed. His family runs from 5 to 7 yearly. He weighs 25 pounds, full grown, and measures 2 to 3 feet. Though he pesters the vegetable garden and the sweet corn patch, he pays for his depredations in frogs, toads, mice, insects and pests destroyed; and when domesticated is easily satisfied with vegetables and fruit of a discard grade. The best 'coon comes from the States south of the Canadian boundary. The little striped 'coon known as "civet" is now classified in the trade as Bassarisk. It hardly needs to be told the 'coon burrows in hollow trees and logs. The best fur is from Wisconsin, Indiana, Missouri and Nova Scotia, and is the grizzled dark bluish with the well-pencilled black brown stripe. The pity is that in 'coon hunting so much fur is taken unprime that it is sheer waste of the life and profits. Prices ran in 1920, in Montreal for 43,000 from \$30 to \$5 and 30¢ to nothing; in St. Louis from \$14.50 for Minnesotas, to \$10 for Eastern, \$4.50 for Southern.

Badger

Badger was just being tried out as a fur when I left the West and was in great favor. To-day, it is in equal favor in the East. The fur is a yellowish gray with over hairs of light brown and drab, white at the tip. The beauty of this fur is its depth and downy under pelage. The badger is low set and like an Eastern woodchuck. The claws on his forefeet are terrible scratchers and the badger holes of the prairie were our horror, when riding off the road at night. The badger is a great eater of insects and frogs, but he is also a pest to the Western farmer; and as the prairies are more and more cut up into farms, I see his doom sealed; and considering the number of accidents ascribable to the badger holes, I have nothing to say.

It seems to me if badger is to be preserved as a fur, it must be preserved by fur farming. Weird stories are current yet among Western farmers how you always find a skunk and a snake in a badger hole. If you do, I venture to say you will always find the snake half eaten; and where the skunk preëmpts a badger hole, it is a deserted one; for the skunk like the evil spirit of Scripture ejects the true owner of the house; but it is true you do find both denizens in deserted badger holes. I know city naturalists contradict the charge that the badger is a curse to the farmer; but if they will ride across the open prairie at sunset as I used to do, and come home without a fall, or a bad stumble almost throwing one over the horse's head, it will be because nature notoriously looks after greenhorns. I have ridden all my life and am almost afraid to set it down that I have never been pitched but it was because I learned the knack of getting my horse's head up before he rolled, always used an Indian pony and where there were badger holes, kicked my feet free from the stirrups. Prices on badger for New York ran from 45¢ to \$3.10; 17,500 badger were sold in London in April; almost 2000 in New York; almost 10,000 in St. Louis. Wombat is the Australian badger.

Wolverine

Of the wolverine, I have given a fuller account in the second section of the book. He is about the size of a low-set dog and is marked by a saddle stripe of white or lighter fur on his back. He measures 3 to 4 feet and has a dark rich brown fur. He is most abundant in Northern Canada and is the great robber of traps, or anything else to which his keen sense of smell leads him. I have heard old Hudson's Bay men say if he couldn't get a marten to eat, he would eat the trap; and if he couldn't get the trap, he would come to the trapper's shack and get his bacon, and if he couldn't get his bacon, he would eat the trapper's moccasins. He is the thief and robber of the trapper world and is so cunning, he can play with a trap and get the bait. His fur is one of the recent comers to the trade.

Viscachas and Chinchillas

In Viscachas and Chinchillas are two of the rarest, finest furs produced in South America.

The demand for Chinchilla runs from 50,000 to 80,000 a year, though in several of the South American countries to-day, chinchillas are so scarce there is a closed season for some years.

The Chinchilla is a mouse that burrows. He has short squirrel-like front legs and long hind legs that give him an absurd miniature kangaroo look. He is 8 to 15 inches long with a long tail and feeds on his hind legs like a squirrel. His fur is a grayish or dark blue slate or pearl. It is soft as down or the face of a pansy and almost as fragile. In Chile, Bolivia and Peru are three species.

The Viscacha comes from the same habitat. He has an absurdly large head for his size, a round-ball shaped body, thick short hind legs, a long tail. His body is 15 to 20 inches, his tail 8; and his gray black fur is the ermine of South America. He is known under the ugly name of Bastard Chinchilla; and the trade uses 8000 of his velvet pelts a year.

Prices for both these furs are subject to wildest variation according to quality. In New York in 1920, 1269 Chinchillas sold for from \$2, \$37, and \$41 to \$106. The Chinchilla sold in St. Louis spring sales exceeded 12,000; in London 13,200.

The Mole

Allied to the Chinchilla in the fur world is the mole, whose fur is described in another section, of which more than 4,000,000 a year are used in European trade; but as each mole has 8 to 10 wives and a numerous progeny, even that demand has not exhausted the supply. As the world catch of mole is rated at 6,000,000 I suppose 2,000,000 may be ascribed to American trade; but I do not vouch for these figures. They seem to me far too small. It takes 600 mole skins for a short evening wrap, 1000 for a long wrap, which would give barely 2000 moleskin wraps a year for America, with-

out any count of the enormous consumption of mole skins for gentlemen's waistcoats and vests, which was the original use to which mole skins were put in European trade. His fur has been compared to plush, but it is more perishable and more velvety than any plush ever worn. Moles used to sell at 1 to 2 pennies. In 1920 American sales, they brought 44¢ for bundles and in Montreal 248,728 sold. In New York, they sold at 2¢ to 39¢ each and one string of 3000 brought the high price. The moles sold in New York were 1,211,692; in St. Louis 2,250,000; which proves what I have already said about the inaccuracy of trade estimates of the moles in demand. In London spring sales, 2,000,000 moles were sold.

The Squirrels

In the class of fragile furs come the Squirrels, the grays used undyed for evening wraps and coats, the light-striped yellows and browns both dyed and undyed for linings, often the side and belly furs of a darker pelt, the deep brown and almost brown blacks from Austria dyed and undyed for linings for men's coats and for cuffs and collars. The large, dark-furred squirrels have come in the past from Austria and German sources. It was in the dye of these that Germany excelled. The numbers of squirrels sold almost beggar exaggeration. Remembering that the spring sales are only one of three sales held in the great centres each year, here are the figures: New York, 384,397; London, raw, dyed backs, dressed skins, sacks and tails, 793,300; St. Louis, 1,200,000. Considering the variations in quality, prices here mean little unless given with the grade, but in New York prices ran from 5¢ for common and poor to \$2.25 for best grades. Yet there were gray squirrels that commanded \$10 to \$15. This would look like the end of the squirrel as a fur bearer if it were not he has a family of 5 to 6 twice a year. Laws of which an account is given in the Appendix to Part I protect gray squirrel. Practically, there are many sections of the country in which no laws protect the red squirrel, or the little

striped squirrel, which Muir has described as the happiest, most pleasing denizen of the California Sierras.

Of squirrels, there are 249 specimens and grades in America. His range is from Athabasca to Florida, and he is a cousin of the whistling marmot, whose pert cry comes up at your feet in the Rockies, and a relative of the gopher squirrel, whose "yip" surrounds you on the prairie. Gray squirrel is always called a natural fur; because like fisher, it defies dyeing. All the squirrel clan, ground, mountain and tree, are noted for living more or less in colonies of from 40 to 1000. All can be tamed into ridiculously intimate human pets, which should protect them from depredation, but it does not. For linings, boas and whole-piece garments, the European trade uses 2,730,826 skins a year; and multiplying the spring sales by three, the American trade must use even more.

The Japanese Flying Squirrel is used to imitate chinchilla and while trade requirements are given as 20,000 a year, this is obviously a wild guess, for in the spring sales only of 1920, almost 5000 were sold in New York, 3300 in London, and 10,000 in St. Louis.

Ermine

Though the Northern Ermine is a weasel of the most murderous, blood-thirsty type, his little pelt ranks with the rare fragile furs. I have described him fully in Part II. To Elliot Coues must be given the credit for the best description of ermine in the fur world. He is a stoat, called by the trapper a weasel, of a dirty brown in summer, and a white pure as snow in winter except for the black tip to his tail, which is the one thing that betrays him to his enemies; or rather I should say to his victims; for with his snaky stealth, his trick of approaching bird, or hare, by diving under the snow and coming up with a leap on the brain or heart of his victim, which he kills with one stab of his knitting-needle teeth and at once sucks himself full of the warm blood, he is a vicious little hunter, who has no invulnerable enemy but man. He is five to twelve inches long with a fur tail four inches or longer, and fur



Courtesy Gollitz Company.

Marten Front and Back—Most Expensive of Small Furs—Sold at \$ 500 to \$ 700 in 1920.



Mink.

fine as swan's down, crisp as mink. When ermine was dotted with black spots, it was known as the miniver of royalty; but with the doffing of many of the trappings of royalty in modern life — except for coronation occasions — ermine does not command the prices of a century ago. He mates with several wives and each bears a family of 10 to 14 young. Secure in his snowy habitat of the Far North, there is little fear of his extermination. Like death and taxes, the ermine we shall always have with us.

The old way to distinguish ermine from white baby rabbit was the shading of sulphur yellow to his black tail tip; but this has been imitated to defy detection; and I should say the best way to detect imitation ermine to-day is that rabbit is soft and silky, ermine is a crisp, thick fur, stubby in its thickness and incapable of being stroked the wrong way, where you can stroke rabbit and cat flat in almost any direction. The fur of ermine, though soft as swan's down in the young, has a grain and lies in the same direction.

Ermine is sold in bundles of 10 to 50 and used to command prices of 20 shillings to 40 shillings a bundle. This year, it brought prices of \$1.85 to \$1.50 a skin, going low as 16¢ for poor skins, high as \$3.50 for good. The quantities of ermine sold in 1920 sales ran 295,000 in St. Louis; 200,000 in London; almost 74,000 in New York; but these figures are not enlightening; for when the price goes off — as it did in ermine — London holds the best furs off the market.

Hare and Rabbit

Hare and rabbit are among the furs small in size but so huge in aggregates that they stagger calculation. Hornaday gives the distinction between them that hares are long-eared, long-legged and lope; rabbits are short-eared, short-legged and leap or jump with a thump; but for fur purposes, they must be grouped as one.

They are coming along in quantities to swamp markets; yet the market is never swamped; but the dye houses enlarge departments for rabbit, or coney, or hare, or whatever the trade calls them. What matter if they sell only at \$1.40 to \$3.15 a pound? When Eng-

land imports 82 to 90 million skins a year, and Australia exports 40 to 50 millions, and Russia uses 4 to 5 millions a year, and America 9 to 12 millions, and Canada can sell all her own and resell 12 million from Australia, one begins to have a delirium tremens of rabbit. One would not have to do much figuring to prove that rabbits bring more money to the fur trade than seal and marten and sable combined. It may be called the poor man's fur; but when it comes out of the dye works as seal, ermine, fox, lynx, it also becomes the fur of the rich; and it is the one supply of fur that seems exhaustless. But rabbit should have a fur deep as your hand is wide; but that means nothing; for the dresser's evening machine can cut it to a stub. The dye can be told from the color of the under skin; and the fur can be told from the "catty lick" of the sheen. Its gloster does not last, and to me, rabbit dyed never so well always lacks lustre. It is not a durable fur; but for such wear as requires a low price for careless usage, rabbit will always remain without a peer.

Red Fox and Cross Fox

Of the fox skins used in the fur trade, it is very hard to put down classifications that conform to science. Ten years ago, the trade would have called black and silver two foxes. To-day, since the fur farming of foxes in Prince Edward Island, black and silver are one and the same, unless black fox is a dyed red fox of poor color or an Arctic fox of some defect dyed. Of the foxes known to trade rated as to price to-day, cross fox, blue fox and Arctic fox come first. Red fox, white fox, kit fox and gray come lower in the scale. The world output of fox peltries runs from 1,600,000 to 2,000,000, of which three-quarters are reds. The best foxes come from America, and the best in America from Prince Edward Island, Alaska, Labrador and the North. Europe used 30,000 white foxes a year; America, 70,000; and Canada easily used 5000 Polar foxes a year.

Science describes the white fox as an Arctic color phase of the red, though old French trappers will tell you cross fox is not

called cross because he is a cross-breed, but because his markings of darker fur down his back and across his shoulders resemble a cross.

When the white colored fox changes his pelt to spring color, he is called stone fox; but science recognizes no such distinction. Nor does science recognize the distinction between the blue fox and the Arctic. Yet on the fox farms of the Aleutians, the Arctic foxes are slaughtered off to prevent their blood spoiling the strains of blue fox for fur fox. All are known to science as color phases of the Red Fox Family, variegated by climate and habitat. In the fur trade, grades vary in each of the divisions, silver, cross, blue, Arctic, red, white, kitt and gray. The little kitt fox is the gray fox of Virginia to Arizona. The kitt fox is the small fellow of Pennsylvania and the Eastern States. The red ranges in value as to habitat from the Rio Grande to Alaska, the best red coming from the North.

As shown in the fur sales of 1920, prices follow these classifications. London fur brokers classified foxes as silver, cross, red, white, blue, gray, kitt. Montreal and New York followed the same classification; and the prices ran for silver fox up to \$1200; for cross from \$89 to \$200; for best red from \$5 to \$50; for best white from \$28 to \$70; for blue from \$200 to \$300; and in the four centres of the great sales, these prices were almost uniform.

What constitutes good fox has been given in the section on fur farming; and how fox furs are used in imitation is given in the same chapter.

At time of writing fox is the most popular fur in the world.

Bear and Wolf

The same difference between the classifications of science and the fur trade come in Wolf and Bear.

Here, corresponding to foxes, you have the shaggy gray and brown timber wolf at the head of the list. His fur is deeper than fox but taken when he is young and in prime mid-winter coat, it can be dyed for silver and cross fox; and is more durable. Comes

next the Northern wolf, smaller than the big timber wolf, but with a silky hair that can be bleached or dyed to imitate blue or white fox, with a tail that sells for best boas. At the foot of the list is the coyote, meanest of all the tribe, a skulker, whose brush can be dyed for boas.

All have the same characteristics. They litter 5 to 6. They hunt in packs. They prey on all other fur-bearing animals. They are treacherous to their own kind and will kill a mate, or disembowel their own young. They kill for the lust of killing and are as great a peril to stockmen's herds as to the traps of the hunter. There is no closed season for wolf and there is little danger to human life from any of the wolves except the big timber wolf; and that danger is so great it is only denied by study chair naturalists. The largest specimen of any timber wolf I have ever seen is in the Government museum of Ottawa. He is larger than any Newfoundland dog; and in my early days at Rat Portage, or modern Kenora, before it was a pleasure resort for Winnipeg, I know of a trapper's skeleton being found with nine such timber wolves skeletons round him in a circle, which tells its own tale of what happened. Round James' Bay in Labrador and from Norway House to Hudson Bay, such tragedies are not uncommon, though the victims are usually children or a squaw, who has been benighted on the trail. I recall the late Lord Strathcona telling of his sensations when such wolves looked through his cabin window up at Battle Harbor, Labrador; and I know a Hudson's Bay chief factor, whose family was followed for hundreds of miles along Mackenzie River, when they were coming out by dog train one winter when rabbits were scarce and the wolf packs were attracted by the smell of the frozen fish carried to feed the dogs.

The sooner wolves are exterminated, the better for all other fur bearers; and the most of the Provinces and Western States pay a bounty for wolf scalps. It used to be a bounty for wolf tails; but the crafty Northern Indian sometimes brought tails from which the game wardens could not swear the wolves had been killed.

Wolf pelts sold in Montreal this year from \$5 to \$45. One timber wolf brought \$72; another unprime brought 70¢. The total of wolves sold in the spring sales numbered 155,000 for Europe and America.

Black bear make the best fur. Grizzly bear is the king in size — 1100 pounds he weighs — Polar bear come next, weighing close to 800 pounds; and others are known as brown bear, a variation of the black; silver tip, a variation of the grizzly; and white bear, a small inland variation of the Polar. White bear is a landlubber; Polar, a sea lover. The range of the bear is from the Polar Sea to the Rio Grande; but the best bear fur comes from the North.

Bear has commonly 2 cubs a litter and comes to maturity in the 6th or 7th year. I think the largest measurement given for any bear is 9 feet for Alaska grizzly, the Polar running a close second at 7 to 8 feet. White inland bear and black bear are smaller; and their fur is best for the trade, being used for coats, cuffs, collars, trimmings. The coarser, larger bear skins are sold only for rugs and robes. There is an estimate given that the trade takes a million bear a year. I consider the figures wild. The spring sales of bear in 1920 did not exceed 10,000 for Europe and America.

The 'coon-like opossum is known to every boy who has gone hunting in the South. It measures like the tree-climbing 'coon from 4 to 3 feet, and is like the 'coon a mottled gray. The trade uses 600,000 opossum in fur for one to two seasons. The price is not high, nor is the fur a high grade. It is warm but is not durable, and is used chiefly for cheap capes and trimmings and imitation furs. Prices ran this spring from \$2 to \$4.

Musk-ox is unlikely to come into the fur trade except as a robe; for it is strictly protected by Canadian law.

Add to these furs the leopard and lion furs of Africa, the pony of Russia, the goat of China and Tibet, the kangaroo and wallaby or rock kangaroo of Australia; and you have the 60 or more varieties of marketable fur known to the fur trade.

I have often been asked, what is the average catch of the average

trapper in the North worth a season? If I had been asked that ten years ago, I would have answered instantly from \$700 to \$1000; for that was a good average for a man who didn't find a gold mine of silver fox or marten. To-day, I would not answer that question. Silver fox farmers who succeed, muskrat renters who go fifty-fifty — must have doubled that and trebled it and quadrupled it in 1919. But prices and fashions may veer as the wind veers; and I answer as the Mexicans used to answer me, when I asked political questions that were chancy: "Quien sabe?"

APPENDIX TO PART I

LAWS OF UNITED STATES AND CANADIAN PROVINCES REVISED
TO DATE ON SEASONS FOR DIFFERENT FURS. LAWS TO PRE-
SERVE GAME—FUR FARMS—LICENSES AND ROYALTIES TO
GAME WARDENS.

LAWS RELATING TO FUR-BEARING ANIMALS, 1919.

A SUMMARY OF LAWS IN THE UNITED STATES, CANADA, AND NEWFOUND-
LAND, RELATING TO TRAPPING, OPEN SEASONS, PROPAGATION, AND BOUNTIES.

LEGISLATION OF 1919.

Twenty-nine of the 44 States which held legislative sessions this year enacted laws relative to fur-bearing animals. The general tendency was to increase restrictions and afford greater protection to the animals. Laws fixing State seasons on fur animals were enacted in Alabama, Idaho, and South Carolina, and trapping licenses were prescribed in Alabama, Arizona, Idaho, Illinois, Minnesota (residents), Nebraska, Ohio, and South Carolina. Details of the more important new laws are included in the following summaries under States and Provinces.

Alabama. — A general act prescribes a close season on beaver, otter, bear, fox, raccoon, opossum, mink, and muskrat from March 1 to October 31, requires a \$10 trapping license, and makes it unlawful to trap on the lands of another without written permission. Other provisions of the act permit a land owner to protect his premises from the depredations of fur animals, and to trap on his own lands during the open season without a license.

Arizona. — Beaver are protected until December 31, 1922; a license (fee, \$2.50) is required of persons over 18 years of age to hunt or trap fur or

predatory animals, and it is made an offence to disturb or remove the traps of a licensed hunter who is trapping on the public domain or under permission on the lands of another. Fur and predatory animals may be kept, under permit from State game warden, for propagation, exhibition, or sale. Fur and predatory animals are defined as mountain lion, bear, wolf, coyote, civet, and ring-tailed cats, leopard, fox, beaver, otter, badger, fisher, skunk, raccoon, opossum, mink, marten, weasel, muskrat, mole, and wood rat, all of which, except beaver, may be taken at any time.

Arkansas. — The open season on bears is fixed as November 10 to January 15, thus lengthening the season five days. State hunting licenses are required to take bears, and a license (fee, \$1.50) is prescribed for each dog used in hunting bears. The export of bears is prohibited, except that a licensed nonresident under affidavit of lawful killing may take out one animal if not for sale.

Connecticut. — The season on raccoon is fixed as October 16 to January 31, instead of October 16 to February 28; and the season on skunks is closed January 31 instead of April 30.

Delaware. — Otter, after being protected at all seasons for several years, may now be taken from December 1 to March 25; the season on raccoon and opossum is closed January 1 instead of February 15; the uniform State open season on muskrat is made from December 1 to March 10.

Idaho. — Licenses are required for trapping fur animals (fees, resident, \$5; nonresident, \$25; alien, \$50). An open season from October 1 to March 31 is fixed for all fur animals except bear — beaver and otter formerly could be taken under a permit from the State warden only when injuring property. Bear and predatory animals, including mountain lion, wolf, coyote, lynx, bobcat, jack rabbit, skunk, and weasel, may be killed at any time. Provision is made for the issuance of permits by the State warden to persons desiring to raise fur animals, in captivity.

Illinois. — The period from November 1 to March 15 is prescribed as the open season for fur animals, including foxes, which formerly were unprotected. Possession of green hides is prohibited except during the open season and the first 10 days thereafter. Trapping licenses are required (fees, resident, \$1; nonresident, \$10.50).

Maine. — A special license (fee, \$25) is required to take beaver in such territory as may be opened to beaver trapping by the commissioner. The fee for a general license to trap in unorganized townships is increased

from \$5 to \$10, but bears and bobcats may now be taken without a license. It is unlawful to transport or dispose of a beaver hide unless an official seal of the commissioner has been attached thereto. The bounty on bobcat and Canada lynx is increased from \$4 to \$10.

Massachusetts. — A close season from January 1 to September 30 is prescribed for raccoon.

Michigan. — The period during which beaver may be taken under a special license is fixed as November 1 to April 15, thus shortening the season one month. The season on otter, mink, fisher, and marten is shortened one month by closing February 15 instead of March 15. October 15 to December 31 is prescribed as the open season on raccoons, and October 16 to April 14 north of Range 20, and December 16 to March 31 south of Range 21, on muskrats instead of the former State season from November 16 to March 14. Badger, beaver, and muskrat are protected at all times in and within 2 miles of any city public park containing over 200 acres of which 150 acres or more is woodland.

Minnesota. — The law relating to fur animals is amended generally in the act revising the game laws. Raccoon, fisher, and marten, formerly unprotected, are included in the list of fur animals for which close seasons are prescribed. The period from December 1 to April 1 is fixed as the open season on mink and muskrat, thus shortening the season two weeks. Protection is removed from black bear. Nonresidents are prohibited from trapping, but residents may trap under a \$1 license. The commissioner may issue licenses (fee, \$1; bond, \$500) to trap a limited number of beaver, and the skins of such beaver when tagged (fee, \$3) may be bought, sold, or transported at any time. State bounties, wolf, \$7.50; cub wolf, \$3, were prescribed.

Missouri. — The period from November 1 to January 31 is fixed as the open season on fur animals instead of December 1 to February 1. A license (fee, \$5) is required to breed fur animals.

Montana. — A close season from May 1 to September 14 is prescribed for marten and a special license (fee, \$1) is required to trap them.

Nebraska. — Trapping licenses are prescribed (fees, resident, \$2; nonresident or alien, \$10). The former season of November 1 to February 15 on fur animals is changed to November 20 to March 20 on muskrat, opossum, and otter; September 20 to March 20 on raccoon and skunk (skunk formerly unprotected); and December 1 to January 31, on mink.

New Hampshire. — A special season from November 1 to March 31 is prescribed for muskrats on the Connecticut River.

New Jersey. — It is now unlawful to take skunk, mink, or otter in any manner except by trap. The months of April and May are included in the period during which foxes may be hunted under permit from the board of game commissioners.

New York. — Raccoons may now be taken in Catskill Park from October 1 to March 15 in any manner except by trapping, and they may be taken in the rest of the State from November 10 to February 10 in any manner. Skunks may not be hunted, pursued, or killed by aid of dogs.

North Dakota. — The fee for a resident trapping license is increased from \$1 to \$2. Mink, muskrat, skunk, and raccoon may be raised in domestication under a \$5 breeder's license, and wild fur animals may be taken at any time for breeding purposes under permit and \$500 bond. Otters are protected indefinitely.

Ohio. — Licenses to trap fur animals required (fees, resident, \$1; nonresident, \$15). It is unlawful to destroy the house, den, or burrow of any fur animal. The former season of November 15 to February 1 is changed to December 1 to March 1 on muskrats, and to November 1 to February 1 on raccoon, mink, skunk, and opossum. The period from October 2 to January 1 is fixed as the open season on foxes instead of October 2 to January 9.

Pennsylvania. — The bounty on wildcats is increased from \$6 to \$8, and on weasels from \$1 to \$2.

Rhode Island. — The period from November 1 to February 1, instead of November 1 to April 15, is fixed as the open season on raccoon.

South Carolina. — Hunting licenses are required to take fur animals. State open seasons from October 1 to March 15 on bear, mink, muskrat, opossum, otter, raccoon, and skunk, and from October 1 to February 15 on foxes are prescribed in lieu of local protection in a few counties.

South Dakota. — The age limit for persons not requiring trapping licenses is reduced from 18 to 14 years. The fee for a nonresident trapping license is increased from \$10 to \$25. It is made unlawful for one person to set or operate more than 75 traps at one time. Otter and beaver are protected indefinitely, and the open season on mink, skunk (formerly unprotected), and muskrat is shortened one month by being fixed from noon December 1 to noon March 1.

Utah. — Marten are protected indefinitely. Possession of skins of protected fur animals is prohibited, unless duly tagged by commissioner. Fifty per cent of the proceeds from the sale of hides of beaver taken under permit must be paid by commissioner to trappers as compensation for trapping the animals. Formerly all the proceeds of such sales were converted into the State game fund. Bounties are increased, on wolf, from \$50 to \$62.50; on bear and mountain lion or cougar, from \$25 to \$30; on coyote, from \$2.50 to \$4; and on lynx or bobcat, from \$2.50 to \$3.

Vermont. — A \$10 bounty is prescribed for black bear taken in the State between May 1 and November 1.

Washington. — A breeder's license (fee, \$10; renewal, \$5) is required to raise fur animals in captivity.

West Virginia. — The open season on red fox, raccoon, mink, and muskrat, the only fur animals protected, is made November 1 to February 1 instead of November 1 to December 31.

Wisconsin. — The open season on beaver in Price, Rusk, and Sawyer Counties is changed from the month of December to the months of February and March. The season on raccoon in Marathon County is fixed as August 15 to January 1. The season on muskrats in Calumet, Manitowoc, and Sheboygan Counties is fixed as March 1 to April 15.

Wyoming. — A license (fee, \$1) is required for each dog used in hunting predatory animals on national forest during the close season for big game, and the fee for a permit to hunt predatory animals is reduced from \$5 to \$3. Continuous protection on beaver is extended to 1925.

Manitoba. — The fee for resident trapping licenses is increased from 50 cents to \$2, and for resident fur-trading licenses from \$5 to \$10. Fur traders were allowed until September 30 to file a report on their dealings.

New Brunswick. — Continuous protection on beaver and sable was extended to July 1, 1920.

Saskatchewan. — The period from December 1 to April 30 is fixed as the open season on beaver throughout the Province (formerly beaver were protected throughout the year south of Churchill River and the season north of that river was from November 1 to April 30). The lieutenant governor in council may prohibit the killing of beaver in any municipality. The bounty on timber wolves is increased from \$5 to \$10.

Yukon. — It is made unlawful to export raw furs except under permit issued by the commissioner and upon payment of an export tax.

FEDERAL LAWS.

Two Federal laws have a bearing on the fur industry of the United States — the Lacey Act, governing interstate commerce in game, and the tariff act of October 3, 1913.

That part of the Lacey Act codified as section 242 of the Criminal Code (35 Stat. 1137) makes it unlawful to ship or transport "from any State, Territory, or District of the United States, to any other State, Territory, or District thereof" the bodies or parts of bodies of any wild animal or bird killed or shipped in violation of law of the State, Territory, or District in which the same were killed or from which they were shipped. This makes it unlawful to ship out of any State skins or pelts illegally taken or shipped. Section 243 of the Criminal Code requires packages containing furs, when shipped in interstate commerce, to be plainly marked, so that the name and address of the shipper and the nature of the contents may be readily ascertained by inspection of the outside of the package.

The tariff act of 1913 places a duty of 10 per cent ad valorem on live animals shipped into the United States. Paragraph 397 of this act places on the free list animals imported for breeding purposes by a citizen of the United States: "*Provided*, That no such animal shall be admitted free unless pure-bred of a recognized breed and duly registered in a book of record recognized by the Secretary of Agriculture for that breed." This act has made it impossible thus far to admit free of duty any foxes or other Canadian fur animals for propagation. Raw furs not advanced in manufacture are admitted free of duty.

LAWS OF STATES AND PROVINCES.

The following is a summary by States and Provinces of trapping regulations now in force, open season for taking fur animals, provisions relating to their propagation and possession, and to bounties offered for the destruction of predatory species, or those considered harmful.

The laws relating to deer and other big game, rabbits, and squirrels are not considered here, as they appear in the annual game-law bulletin.¹

Laws relating to bears are included, mainly because of their connection with bounties. The bounty laws included relate to all animals on which bounty is paid.

¹ Farmers' Bulletin 1077, "Game Laws for 1919."

Under the heading "Open seasons" the dates given are, unless otherwise stated, *the first and last days of the open season*.

Under the heading "Trapping" the expression "no legislation" indicates that no specific trapping provisions exist, the general trespass laws of the State not having been considered.

ALABAMA.

Open seasons. — Beaver, otter, bear, fox, raccoon, opossum, mink, and muskrat may be trapped from November 1 to March 1; opossums may be hunted with dog or gun from October 15 to March 1.

Possession of opossum and the young of protected fur animals during close season prohibited. Owner may protect premises in any manner at any time from depredations of fur animals.

Trapping. — Trapping license (good during trapping season) required (fee, \$10); issued by probate judge. Owners, tenants, and members of families may trap on own land during open season without license. Unlawful to trap on lands of another without written permission from owner or agent. Poisons, drugs, or chemicals may not be used in taking game or fur animals.

Propagation. — No legislation.

Bounties. — None paid.

ALASKA.

Open seasons. — Land otter and mink, November 16 to March 31; fox and weasel, November 16 to March 14; muskrat, December 1 to May 31; lynx (wild-cat), November 16 to February 29. No close season for black bear, wolf, wolverine, ground squirrel, or rabbit.¹ Close season on marten until November 15, 1921; on sea otter until November 1, 1920; on beaver until November 1, 1923. No open season in Aleutian Islands Reservation, where trapping may be done only by special permit.²

Trapping. — The Secretary of Commerce makes all regulations for taking fur animals in Alaska. Under regulations published March 16, 1918, it is unlawful to use a "klips" trap, a steel bear trap, or any trap having a spread exceeding 8 inches; to kill fur-bearing animals with strychnin or other poison; to trap protected fur animals at any time when the skin or pelt is not prime; or to have in possession or sell or export unprime skins of animals protected by close seasons (such skins

¹ *South of latitude 62°.* — Open season for brown bear, October to July 1; walrus and sea lions, no open season. *North of latitude 62°.* — Open season for walrus and sea lions, August 1 to December 10; limit, 1 each a season; no close season for brown bear or sea lion.

² The fur-seal fisheries, the Aleutian Islands Reservation, and the Afognak Reservation are subject to special legislative and administrative control. For specific information regarding them, application should be made to the Commissioner of Fisheries, Washington, D.C.

subject to confiscation). Shipments of furs must be reported to the Bureau of Fisheries, Department of Commerce, on blanks provided for that purpose.

Propagation. — Owners of establishments for breeding fur animals are subject to the same restrictions as to season for killing and condition of pelts as are trappers of wild fur-bearing animals. Fur farmers are required to furnish reports to the Bureau of Fisheries and to allow agents of that bureau free access to establishments where animals are kept in captivity.

Within the Aleutian Islands Reservation the Department of Agriculture grants permits to propagate fur animals and to trap them for breeding purposes.

An act of the territorial legislature protects premises of fox breeders or breeders of other fur animals from trespass.

Bounties. — Wolf, \$15; eagles, 50 cents.

ARIZONA.

Open seasons. — Beaver protected until December 31, 1922. No close season on other fur and predatory animals.

Trapping. — State trapping license (fee, \$2.50) required of persons over 18 years of age to hunt or trap fur and predatory animals. Issued by warden, designated deputies, and clerks of boards of supervisors. License not required for trapping on own land. Predatory and fur animals defined as mountain lion, bear, wolf, coyote, civet and ring-tailed cats, leopard, fox, beaver, otter, badger, fisher, skunk, raccoon, opossum, mink, marten, weasel, muskrat, mole, and wood rat. Unlawful to disturb or remove the traps of a licensed trapper who is trapping on the public domain or on lands for which he has permission to trap. Unlawful to use fish or the flesh of any game bird or animal for trap bait. Owner may protect his premises from the depredations of predatory and fur animals at any time. Mountain lion, wolf, fox, coyote, lynx, wildcat, skunk, or other obnoxious animal may be taken on State game preserves only under regulations of the State game warden.

Propagation. — Under permit from State game warden, fur-bearing and predatory animals may be kept for propagation, exhibition, or sale.

Bounties. — County boards are required to pay for wolf or mountain lion, \$10 each; and may pay for coyote, \$2; lynx or wildcat, \$1; raccoon, 25 cents; jack rabbit, gopher, or prairie dog, 5 cents.

ARKANSAS.

Open seasons. — All fur animals, except beaver, otter, and bear, October 1 to February 29; bear, November 10 to January 15 (limit, one a season); beaver and otter, no open season before January 1, 1922. Raw skins of fur animals may not be possessed or sold, except between October 1 and March 15. Fur animals found destroying crops or poultry may be killed at any time.

Trapping. — A person using 12 or more traps to take fur animals is required to secure an annual trapper's license (fee, \$20). Unlawful to trap bears, to hunt them at night with torch or searchlight, or to sell or exchange them; export is prohibited except by nonresident licensee under affidavit that the bear was legally taken and is not for sale. Hunting license required to kill bears. Fee, resident, \$1.10; nonresident, \$1.50; dog, used in hunting bears, \$1.50.

Propagation. — The game and fish commission is authorized to issue permits to breeders of game and fur animals under such regulations as it may prescribe.

Bounties. — County courts may offer bounty on wolf, wildcat, or panther, and fix the amount of such bounty.

CALIFORNIA.

Open seasons. — No open season for beaver or sea otter. Open season for black or brown bear, ring-tail cat, coon, pine marten, fisher, wolverine, mink, skunk, river otter, and fox, October 15 to February 29. Seals and sea lions are protected at all times in game district 19.

Trapping. — Trapping license: citizen of United States, fee, \$1; alien, \$2. License issued free to trappers 18 years old or under. Licensed trappers, except those 18 or under, are required to report catch before July 1. Fur animals may be killed at any time when destroying property. Unlawful to use poisons in taking fur animals or to dig or smoke out skunks from dens. Use of gun larger than No. 10 gauge prohibited.

Propagation. — No legislation.

Bounties. — Mountain lion, female \$30; male, \$20; paid by State game commission. Boards of supervisors of counties may at their discretion fix the rate and pay bounty on coyote, wildcat, lynx, bear, or mountain lion. Many counties now pay a bounty on some of these animals, especially on coyotes.¹

COLORADO.

Open seasons. — No close season for fur animals, except beaver.

Trapping. — Hunting license required for trapping; fee, resident, \$2; nonresident, \$25. Beavers may not be trapped for fur at any time, but the owner of property damaged by the animals may apply to the State game and fish commissioner for a permit to kill them under such regulations as he may provide as to the disposition of the skins.

Propagation. — No restrictions, except as to beaver and game animals.

¹ For information in regard to bounties in any county, application should be made to the county clerk.

Bounties. — None paid by State since 1895. On petition of 50 freeholders, county commissioners may levy a tax to pay a bounty on coyote, wolf, and mountain lion.

CONNECTICUT.

Open seasons. — Otter, November 1 to March 31; raccoon, October 16 to January 31, but landowner may kill the animals at any time to protect property; skunk, November 1 to January 31; may be taken at any time to protect property. No close season on other fur animals.

Trapping. — Unlawful to trap with scented baits; to trap on lands of another without permission; and to take animals with a snare or similar device. Traps must be visited at least once in 48 hours and must not be set in path, wood road, or specially prepared furrow. Hunting license is required for trapping (except of a resident on own land); fee, resident, \$1; nonresident, \$10; alien, \$15; with an additional 25 cents recording fee for each license. Persons under 16 years of age, while denied a hunting license, may obtain one for taking fur animals only.

Propagation. — No restrictions on possession or sale of fur animals kept in captivity.

Bounties. — Towns are permitted to pay bounty on wildcat or fox (not over \$5); on weasel, woodchuck, wild Belgian hare, or wild German rabbit (not over \$1).

DELAWARE.

Open seasons. — Skunk, mink, and otter, December 1 to March 25; fox, October 1 to April 30; raccoon and opossum, October 1 to January 1; muskrat, December 1 to March 10.

Trapping. — Nonresident trappers are required to hold hunting license (fee, \$10.50). Unlawful to use pitfall, deadfall, scaffold, cage, snare, trap, net, pen, baited hook, or baited field or any other similar device, or any drug, poison, chemicals, or explosives for taking birds or animals protected by the laws of this State, except muskrats, skunks, minks, and otters, and except as otherwise expressly provided. Traps or other devices unlawfully set are subject to confiscation. Muskrats may not be taken during the time of any flood or freshet when such flood or freshet may cause them to leave their usual places of shelter and protection. Muskrats may not be shot at night or hunted with a dog. Unlawful to destroy the nest, den, or lair of any animal protected by law. Unlawful to hunt, kill, take, or destroy any protected animal, except muskrat, skunk, mink, and otter, while the ground is covered with snow. Unlawful to shoot at or destroy any fox while such fox is being chased by dog or dogs. Unlawful to sell or export any fox or fox hides. Owners of property may at any time destroy fur-bearing animals to protect such property.



Marten.



Courtesy Hudson Bay Company.

Otter — Durability of This Fur 100 %; Has Increased in Price from \$ 10 to \$ 100 in 20 Years — Note

Small Tail Compared to Brush of Fisher.

Propagation. — No restrictions, provided a permit is obtained from the chief game and fish warden (fee, \$1). A restricted number of wild fur or game animals for propagating purposes may be taken under permit.

Bounties. — None paid.

DISTRICT OF COLUMBIA.

No legislation relating to fur animals.

FLORIDA.

Open seasons. — Beaver and otter, November 1 to January 31. No close season for other fur animals.

Trapping. — No legislation.

Propagation. — No legislation.

Bounties. — None paid.

GEORGIA.

Open seasons. — Opossum, October 1 to February 29; fox, Habersham County, September 1 to May 14. Fur animals not otherwise protected.

Trapping. — Permission of owner required to trap on lands of another. Hunting license required to trap outside one's own militia district; fees for State license, nonresident, \$15; resident, \$3; county license, \$1.

Propagation. — No restrictions on propagation of unprotected fur animals.

Bounties. — None paid.

HAWAII.

Hawaii has no wild animals valuable for fur. There are no restrictions on the propagation of fur animals, except that mongooses and rabbits may not be kept or bred. Pet rabbits may be raised, if kept in confinement.

IDAHO.

Open seasons. — Beaver, otter, marten, mink, muskrat, raccoon, fox, and fisher, October 1 to March 31; bear unprotected. Predatory animals — mountain lion, wolf, coyote, lynx, bobcat, jack rabbit, skunk, and weasel, unprotected.

In Black Lake Game Preserve, beaver, otter, marten, fisher, fox, mink, and wolverine are protected at all times; mountain lion, bear, lynx, wolf, coyote, and wildcat may be destroyed by game warden or duly authorized persons.

In Payette Game Preserve, bear, lynx, wolverine, fox, otter, beaver, marten, mink, and fisher are protected at all times; mountain lion, timber wolf, coyote, and wildcat may be killed by game wardens or duly authorized persons.

In Selway and Big Lost River Game Preserves, beaver, otter, marten, fisher, fox, and mink are protected at all times; mountain lion, bear, lynx, wolf, coyote, wolverine, and wildcat may be killed by game wardens or duly authorized persons. In Big Lost River Preserve, badgers, weasels, skunks, and rabbits may be killed by anyone without permit.

In Big Creek Game Preserve, beaver, otter, marten, fisher, fox, and mink are protected at all times; mountain lion, lynx, timber wolf, coyote, and wildcat may be killed by game wardens or duly authorized persons.

Trapping. — License required to trap fur-bearing animals: Resident, \$5; nonresident, \$25; alien, \$50. Issued by warden, deputy, or authorized agent. Licensed trapper must make verified report at end of season of number and kind of fur caught, where sold, and the price received therefor. Skins of fur or other animals legally taken, within or without State, may be possessed or sold at any time. Unlawful to destroy, disturb, or remove traps of licensed trapper. Unlawful to use flesh of any game bird or game animal for bait in trapping or taking fur-bearing animals. Muskrats may be destroyed in irrigated districts, but muskrat houses may not be disturbed except under permit of State warden to protect private or public ditch or water course. Person may protect own premises from depredation of fur-bearing animals, under permit from State warden.

Propagation. — Permit from State warden required. Permittee must make verified yearly report showing number of animals kept in captivity, number sold, and number on hand.

Bounties. — Coyote, lynx, or wildcat, \$2.50 each; bear or wolf, \$10; mountain lion, \$25; paid from predatory wild animal funds administered through the State live stock sanitary board. Bounty of 2 cents each on pocket gopher, ground squirrel, and prairie dog; fund raised by taxation; administered like predatory wild animal fund.

ILLINOIS.

Open seasons. — Raccoon, mink, muskrat, skunk, opossum, fox, and otter, November 1 to March 15. Possession of green hides of fur-bearing animals prohibited except from November 1 to March 25.

Trapping. — License required to trap fur-bearing animals: Resident, \$1; nonresident, \$10.50. Issued by county, city, or village clerk. Expires March 15. Licenses not required of landowners and tenants and members of families to trap during open season on the lands on which they reside. License not issued to person under 16 years of age without written consent of parent or guardian.

Holder of a license, within 30 days after its expiration, must report all hides of fur-bearing animals taken, sold, shipped, or dealt in, together with names and addresses of persons to whom sold or shipped.

Unlawful to use spear or similar device for hunting or taking fur-bearing animals, or explosives, chemicals, or mechanical devices or smokers of any kind to drive them out of their burrows, dens, or houses. Houses and dens of fur-bearing animals protected except when they obstruct a public or private ditch or watercourse. Use of automobile or vehicle propelled by mechanical power, or the lights thereof, or ferret in hunting or taking fur-bearing animal prohibited. Unlawful to trap on lands of another without permission from owner, agent, or occupant.

Propagation. — Permit is required to conduct a fur farm on which protected animals are reared; fee, \$2.

Bounties. — None paid by State. Counties may at their discretion pay bounty on ground hog and crow.

INDIANA.

Open seasons. — Beaver, raccoon, fox, otter, opossum, and skunk, November 20 to February 1; mink and muskrat, November 1 to March 31. Muskrat houses protected at all times except when obstructing ditches or watercourses.

Trapping. — Nonresident trapper requires license (fee, \$15.50). Trapping on lands of another without written consent of owner, occupant, or lessee is unlawful. Traps set on such lands must be placed within burrow of animal or a hollow log and must be visited at least once in each 36 hours. Protected fur animals may be killed at any time on one's own premises to protect property.

Propagation. — All birds and animals raised in captivity are considered domestic stock, and the owner may possess, sell, ship, transport, or otherwise dispose of them without regard to laws regulating the killing and disposition of wild birds and animals.

Bounties. — Crow, 10 cents each; may be paid by counties. Boards of county commissioners are authorized at their discretion to pay bounty on wolf, fox, woodchuck, owl, or hawk.

IOWA.

Open seasons. — Beaver, mink, otter and muskrat, November 15 to March 15; may be destroyed at any time to protect public or private property. Muskrat houses are protected at all times. Possession of beaver, mink, otter, or muskrat is lawful only during open season and first five days of close season.

Trapping. — Hunting license required for trapping; fee, resident, \$1; non-resident, \$10.50.

Propagation. — No restrictions except as to possession of protected species.

Bounties. — Adult wolf, \$20; wolf cub, \$4; wildcat, \$1; paid by county. Boards of supervisors of counties may allow bounty on crow, ground hog, pocket gopher, or rattlesnake.

KANSAS.

Open seasons. — Muskrat, skunk, mink, raccoon, opossum, and civet cat, November 15 to March 15. No open season for beaver or otter until 1921.

Trapping. — The owner or legal occupant of land may destroy fur-bearing animals protected by law when such animals are destroying poultry or damaging other property. Unlawful to hunt or kill any wild animal upon the lands of another without his written permission.

Propagation. — No legislation.

Bounties. — Coyote, \$1; wolf, \$5; crow and pocket gopher, 5 cents each; paid by county.

KENTUCKY.

Open seasons. — Beaver, mink, raccoon, otter, opossum, and skunk, November 15 to December 31; but raccoon, opossum, skunk, and mink may also be taken and killed by dog or gun, October 1 to February 15.

Trapping. — Written consent of owner or lessee required to trap on lands of another. Traps must be set 18 inches or more within a hole, cave, or hollow log, and must be visited within each 36 hours. Traps set unlawfully may be seized or destroyed by anyone. Fur animals may be killed at any time on one's own premises to protect property.

Propagation. — No legislation.

LOUISIANA.

Open seasons. — Bear, November 1 to February 15 (may not be trapped); muskrat, mink, otter, raccoon, skunk, fox, and opossum, November 1 to February 15; beaver, no open season.

Trapping. — License for trapping is required; fee, resident, \$2; nonresident, \$15. Muskrats may be taken at any time within 5 miles of any levee, and may be killed by the owner of land upon which they are destroying property. Skins of animals killed in open season may be possessed in close season. Wild ducks may not be used for trap bait.

Propagation. — Fur animals for breeding purposes may not be captured during the close season. Permit from the department of conservation is required to import wild quadrupeds into the State or to export them from the State.

Bounties. — None paid.

MAINE.

Open seasons. — All fur animals (except beaver, muskrat, raccoon, bear, bobcat, Canada lynx [loup cervier], and weasel), October 15 to February 29; musk-

rat, October 15 to May 14; raccoon, August 15 to February 29. No open season on beaver except when declared by the commissioner of inland fisheries and game. No close season on bear, bobcat, Canada lynx (loup cervier), or weasel. Unlawful to transport or dispose of a beaver skin without official seal of commissioner attached.

Trapping.—Special beaver trapping license, good only in territory opened to beaver trapping by commissioner; fee, \$25. Trappers in unorganized townships of the State are required to take out an annual license except for bear and bobcat (fee, \$10), and on or before December 15 of each year must make such report as the commissioner of inland fisheries and game may require. Any person who sets a trap in an organized county or incorporated place must obtain written consent of the owner or occupant of land on which the trap is set, and must visit such trap at least once in every 24 hours and remove animals caught. All traps must be plainly marked with owner's name and address, either by having the same stamped on the trap or on a metal tag firmly attached to it. A bear trap must be inclosed in a "hut."

Dealers in skins of fur animals must each year take out a license (fee, State, \$25; county, \$2) to engage in this trade and must keep a record of transactions and forward same to the commissioner of inland fisheries and game on or before December 20. Putting out poison for wolves, foxes, dogs, or other animals is forbidden under penalty of fine or imprisonment.

Traps may not be set within 25 feet of a muskrat house. (Special laws in southern Oxford and certain territory in Washington County.) On complaint by landowners of damage done by beavers, the commissioner of inland fisheries and game has authority to declare an open season for beavers on lands where damage occurs. Any person may lawfully kill any wild animal, except beaver, found destroying his property. Unlawful to dig out a fox den at any time.

Propagation.—Permit required to raise fur animals (fee, \$2). Protected species may be taken under special permits by licensed trappers for breeding purposes. No animals may be imported into the State without permit.

Bounties.—Bobcat and Canada lynx (loup cervier), \$10 each; paid by State. Claim for bounty must be made within five days after killing or return from trip on which killing was done. Bounty on bears, \$5 each; paid by State, claim to be made within 10 days after killing.

MARYLAND.

While the State has recently adopted a uniform open season for game, the counties still regulate the taking of fur animals. The State law of 1900 (ch. 371) protecting otter, raccoon, and muskrat between April 1 and January 1 was amended

until it applied to only six counties in 1912 (ch. 843), some of which also have local laws that take precedence. Local laws providing protection to fur animals or regulating their capture are in force in the following counties:

Allegany County. — Raccoon and opossum, open season, September 1 to March 31; hunting license required to capture either. Muskrat, open season, January 1 to April 1. Bounty on wildcat, \$2; fox, \$1; hawk or hoot owl, 50 cents.

Anne Arundel County. — Raccoon, open season, October 1 to January 31; may not be taken between sunrise and sunset; unlawful to cut down tree to obtain a raccoon. Muskrat, open season, December 1 to March 1. Unlawful at any time to destroy muskrat dens or houses, unless the animals are destroying property.

Baltimore County. — Unlawful to set traps, except from November 10 to December 20. Unlawful to pursue or kill raccoon and opossums, except from October 1 to February 28 (inclusive); unlawful to hunt them on Sundays or when snow covers the ground. Permits to take certain predatory fur animals when destroying property may be obtained, but such permits may be revoked at any time by the chief game warden. Foxes may not be shot or shot at while pursued by dogs, and it is a misdemeanor to dig young foxes or vixen from dens.

Caroline County. — Muskrat, open season, December 15 to March 31; raccoon, September 15 to March 31; otter, December 15 to March 31. Unlawful for nonresidents to trap without license (fee, \$4.50). Unlawful to dig into or destroy muskrat homes or dens, except when animals are destroying property. Unlawful to use reflector or artificial light in taking muskrats or otters. Unlawful to kill a fox except by hounds in a hunt or when the fox is destroying poultry.

Carroll County. — Unlawful to kill fox except by hounds in a hunt or when the fox is destroying poultry.

Cecil County. — Muskrat, open season, December 1 to February 28 (29); may be taken only by trapping.

Charles County. — Unlawful to shoot muskrats on Nanjemoy Creek and tributaries by aid of light.

Dorchester County. — Open season, raccoon, November 10 to March 14; otter, January 1 to March 31 (State law); muskrat, January 1 to March 15 (local law). Unlawful to shoot muskrats or to use artificial light in taking them. Bounty on crow, 5 cents.

Frederick County. — All fur animals, open season, November 15 to February 28 (29), but night hunting with dogs for raccoon or opossum is lawful at any time. Bounty on wildcat, \$2; mink or fox, \$1; weasel, owl, or hawk, 50 cents.

Garrett County. — Bounty on panther or wolf, \$20; wildcat, \$3; fox, \$1; weasel, 50 cents.

Harford County. — Except for muskrats, trapping is forbidden between December 25 and November 15 of the following year. Open season for raccoon, October 2 to November 30. License required to take muskrats or skunks; fee, resident, \$1.15; nonresident, \$5.15. Unlawful to trap on private property without permission of owner. Bounty of 50 cents each on chicken hawk, pigeon hawk, booby owl, or weasel.

Kent County. — Otter, raccoon, and muskrat, open season, January 1 to March 31 (State law). Unlawful to shoot muskrat or otter by light at night.

Montgomery County. — Raccoon and opossum, open season, October 15 to January 14; muskrat, November 15 to February 28 (29). Nonresident requires license to hunt raccoon or opossum (fee, \$15.50). Setting a snare or trap in or about a fox den is unlawful. Bounty on hawks, 40 cents.

Prince Georges County. — Unlawful to hunt, shoot, or trap muskrats in Aquasco district between March 15 and January 1, or to spear them at any time. Raccoon, open season, October 1 to January 31; may not be taken between sunrise and sunset; unlawful to cut down tree to capture raccoon.

Queen Annes County. — Otter, raccoon, and muskrat, open season, January 1 to March 31 (State law).

Somerset County. — Otter and raccoon, open season, January 1 to March 31 (State law); muskrat, January 1 to March 15 (local law). Unlawful at any time to shoot muskrats.

Talbot County. — Otter and muskrat, open season, December 16 to March 15. Dealers may have skins of either in possession up to March 31. Unlawful to take otter or muskrat at night, except in traps.

Washington County. — Muskrat, mink, skunk, opossum, and otter, open season, December 1 to March 31. Unlawful to shoot foxes while they are being chased by dogs.

Wicomico County. — Otter, mink, and muskrat, open season, January 1 to April 1. Muskrats may be taken only by traps and muskrat houses are protected at all times.

Worcester County. — Muskrat, otter, and mink, open season, January 1 to April 1. Unlawful to trap on lands or marshes of another without permission. Unlawful to chase fox with dogs, March 10 to August 31, or to shoot any fox while it is pursued by dogs.

Bounties. — A State bounty of 50 cents each on bird hawk or chicken hawk killed in the State, paid from the State game protective fund.

MASSACHUSETTS.

Open seasons. — Raccoon, October 1 to December 31. No close season for other fur animals.

Trapping. — Poison may not be used to kill animals, except rats, woodchucks, or other pests on one's own premises. The use of steel traps with spread of over 6 inches and "choke" traps with greater opening than 6 inches is unlawful, as is also the use of snares or, except with consent of landowner, of scented baits. Traps may not be set on inclosed lands of another without written consent. Traps must be visited at least once in 24 hours. Animals "may be taken from traps on the Lord's day," but traps may not be set or reset. Introduction of foxes or raccoons in Dukes County is prohibited.

Propagation. — No legislation.

Bounties. — Seals, \$2; wildcat or lynx, \$5; paid by town, but refunded by county.

MICHIGAN.

Open seasons. — Beaver (under special license), November 1 to April 15; otter, mink, fisher, and marten, November 16 to February 14; raccoon, October 15 to December 31; muskrat, north of Range 20 north, October 16 to April 14; south of Range 21 north, December 16 to March 31. No close season for skunk, bear, wolf, coyote, fox, lynx, and wildcat.

Badger, beaver, and muskrat, in and within 2 miles of any city public park containing over 200 acres, of which 150 acres or more is woodland, no open season.

Trapping. — License required for trapping, or hunting bear and other unprotected animals; fee, resident, \$1; nonresident, \$10. A special license (fee, \$10) is required for trapping beavers. Such license permits the taking of 15 beavers, not more than 4 from a single colony. Unlawful to destroy beaver houses or dams or to have carcass or skin in possession without license seal attached. Unlawful to molest dens of fur animals or to use spears, explosives, chemicals, mechanical devices, or smokers to drive animals from their holes or homes; unlawful to destroy beaver, muskrat, or skunk den or home, to shoot muskrats, or to set a trap within 6 feet of a muskrat house or hole, or to possess carcass or skin of fur animal killed in close season. Fur animals, except beavers, may be destroyed on one's own premises to protect property. Unlawful to trap on State game refuges.

Propagation. — Annual license (fee, \$5) required to engage in raising fur animals. Live animals and skins of animals raised in captivity must be tagged (fee, 5 cents for each tag).

Bounties. — Wolf, \$35; wolf cub under 6 months, \$15; coyote, same as wolf; wildcat or lynx, \$5; fox, \$1; weasel, woodchuck, hawk, or owl, 50 cents; paid by county, half refunded by State. Boards of supervisors may pay additional bounties.

MINNESOTA.

Open seasons. — No open season for beaver or otter; raccoon, October 15 to March 1; mink, fisher, marten, and muskrat, December 1 to April 1. Black bear, skunk, weasel, wildcat, lynx, and fox, unprotected. The commissioner, in his judgment, may issue licenses (fee, \$1; bond, \$500) to trap a limited number of beaver in any locality; skins of beaver taken under proper license, when tagged with a \$3 tag, may be bought, sold, or transported at any time.

Trapping. — Trapping license issued to residents only, fee \$1. Unlawful to molest or destroy muskrat, mink, or beaver house, den, dam, or abiding place at any time or to hunt these animals with dogs. Mink, fisher, and marten may be taken in any manner, and muskrat may be taken by trapping only. Unlawful to take red fox cubs for shipment out of the State. If any of these animals are damaging property the owner may obtain a permit to kill them and destroy their houses or dams. Skins or pelts legally taken may be possessed, bought, or sold at any time. Package or receptacle containing wild quadruped or part thereof when transported by a common carrier must have attached a proper coupon tag bearing signature of licensee shipping same, and show his address and license number, together with number and kinds of wild animals or parts thereof contained in the shipment.

Propagation. — Wild animals raised in captivity under a \$1 permit from the State game and fish commissioner may be sold for breeding or stocking purposes at any time, and under regulations of the commissioner may be killed and any part thereof sold or transported. Under regulations of the commissioner, wild animals may be captured during the open season for breeding purposes.

Bounties. — Wolf, \$7.50; cub wolf, \$3 (paid by State). County or town boards may offer bounty on wolf, gopher, ground squirrel, ground hog, rattlesnake, crow, or blackbird.

MISSISSIPPI.

Open seasons. — Bear, November 1 to end of February.

Trapping. — No legislation.¹

Propagation. — No legislation.

Bounties. — None paid.

MISSOURI.

Open seasons. — All fur animals, November 1 to January 31.

Trapping. — Wild fur-bearing animals may be destroyed at any time and in any way to protect premises from their depredations, and pelts of animals so killed may be removed and marketed in the usual way. Unlawful to sell or offer for sale pelts of fur animals taken out of season. Written permission required to trap on lands of another. Use of poison prohibited in taking any protected animal.

Propagation. — Permits to capture for propagating purposes may be obtained from the State game and fish commissioner; fee, \$5. Breeder's permit, fee, \$5.

Bounties. — Adult wolf or coyote, \$6; young wolf or young coyote, \$3; paid by county and one-half refunded by State.

MONTANA.

Open seasons. — Marten, September 15 to May 1. Beaver may be taken only under a license; provided, taxpayers, owners of real estate, or their authorized agents, may kill beaver on their own premises for the protection of their ditches, dams, etc., but such killing must be reported in writing to the State game warden within 30 days. The skins of animals so taken may be shipped or sold under permit from the warden by the persons killing the animals, but permittees are required to report name of purchaser and number of skins sold.

Trapping. — License (fee, \$1.50) required for trapping, except for wolves, coyotes, and mountain lions. Special license required for trapping beavers, and

¹ The act for protection of game and fur animals (1916, ch. 99) was defeated by referendum vote.

permit required to sell beaver skins. Special license (fee, \$5) required for trapping on State game preserves. Marten trapping license; fee, \$1.

Propagation. — No legislation.

Bounties. — Grown wolf, \$15; wolf pup, coyote, or coyote pup, \$2.50; mountain lion, \$10; paid from State bounty fund raised by tax on live stock.

NEBRASKA.

Open seasons. — Muskrat, opossum, and otter, November 20 to March 20; skunk, raccoon, September 20 to March 20; mink, December 1 to January 31. Unlawful to destroy muskrat houses on premises of another. Beaver, no open season, but if the animals are damaging property a permit to destroy them may be obtained from the chief deputy, game and fish commission. No close season for other fur animals; any except beavers may be taken at any time on one's own premises.

Trapping. — Trapping license, resident, \$2; nonresident or alien, \$10. Unlawful to trap on premises of another without consent of owner.

Propagation. — No legislation.

Bounties. — Such counties as have at any general election voted to pay bounties, pay for wolf, \$3; wildcat or coyote, \$1; mountain lion, \$3.

NEVADA.

Open seasons. — No close season except on beavers, which may not be taken until January 1, 1920.

Trapping. — No legislation.

Propagation. — License (fee, \$10, paid annually to county) required from those who wish to propagate game or fur animals (except beaver). Animals on breeder's own lands may be taken at any time for propagation, and those held in captivity by holder of license may be sold at any time. No bounty may be collected on noxious species raised in captivity.

Bounties. — Mountain lion, \$5; lynx or wildcat, \$2; paid by county. Counties pay bounty of 1½ cents each for pocket gophers when at least 100 heads are presented at one time.

The State board of live-stock commissioners is authorized to pay bounty from funds derived from tax on horses, cattle, and hogs. The rewards are, for coyote, coyote pup, wildcat, or lynx, 75 cents each; mountain lion, \$5.¹

The State board of sheep commissioners is authorized to pay bounty from funds derived from tax on sheep, the payments being the same as those made by the board of live-stock commissioners.²

¹ No bounties have been paid under the provisions of this law.

² *Ibid.*

NEW HAMPSHIRE.

Open seasons. — All fur-bearing animals, except beaver, November 1 to February 29, except muskrats may be taken from the waters of the Connecticut River from November 1 to March 31. No open season for beaver. Raccoons and foxes may be taken by use of dog and gun during October.

Trapping. — Fur-bearing animals defined as beaver, otter, marten, sable, mink, raccoon, fisher, fox, skunk, and muskrat. The right of anyone to kill predatory fur animals at any time when destroying domestic animals or fowls is granted. Skins legally taken may be bought or sold at any time. No person may destroy a muskrat house or set a trap therein, thereon, or at the entrance thereof. No person may trap upon lands of which he is not owner or lessee. All traps must be legibly marked or stamped with trapper's name, and must be visited at least once in 24 hours. It is an offence punishable by a fine to take traps of another or remove fur animals from them. Unlawful to use spring gun, snare, or poison in taking fur animals. Bear traps must be safeguarded in a substantial manner. License for trapping, except on private lands, is required; fee, resident, \$1; non-resident, \$15. Trappers are liable for any damage to domestic animals by traps.

Unlawful to tear down or destroy any fence or wall, leave open any gate or bars, or trample or destroy any crop, on land of another, while trapping or pursuing any wild animals.

Propagation. — Permit (fee, \$2) required to propagate fur animals, game, or fish.

Bounties. — Bear, \$5; hedgehog, 20 cents; wildcat, \$5; paid by State.

NEW JERSEY.

Open seasons. — Skunk, mink, muskrat, and otter, November 15 to April 1; raccoon, October 1 to December 15. Beaver, unlawful to trap, take, kill, or have in possession at any time. The board of fish and game commissioners may grant permits to hunt foxes with hound and firearms from the last day of the open season for quail (December 15) to May 31.

Trapping. — Skunks, minks, muskrats, and otters may not be taken in close season, except that muskrats may be destroyed by owner of canal or dam which they are destroying. Muskrats, skunk, mink, otter, may be taken by trap only, except in Salem County, above Mill Creek, where they may be taken in open season by firearms and light. It is unlawful to disturb the lodge or nesting chamber of muskrats, to molest traps set by another, or to appropriate or take animals caught in such traps.

Propagation. — No restrictions except those imposed by close seasons, during which wild animals may not be taken for breeding purposes. Breeder's license, fee \$5.

Bounties. — Fox, \$3; paid by counties.

NEW MEXICO.

Open seasons. — No close season for fur animals, except beavers, which are protected at all times; provided, when beavers are destroying property they may be killed under permit from state game and fish warden.

Trapping. — No legislation.

Propagation. — Permit from State game warden required.

Bounties. — Coyote, wildcat, or lynx, \$2; wolf, \$15; panther or mountain lion, \$10; paid from county wild-animal fund, raised by tax on property.

NEW YORK.

Open seasons. — Mink and sable, November 10 to March 15; raccoon may be taken otherwise than by trapping in the Catskill Park, October 1 to March 15; raccoon, elsewhere in State, November 10 to February 10; skunk, November 10 to February 10; muskrat, November 10 to April 20. No open season for beaver.

Trapping. — License required for hunting or trapping; fee, resident, \$1.10; nonresident, \$10. Muskrat houses may not be molested, injured, or disturbed, nor the animals shot at any time. Skunks may not be taken by the aid of dogs or by digging out or driving them from dens or holes by smoking or the use of chemicals; if injuring property, they may be taken at any time and in any manner, but the skins of animals so taken shall not be possessed, sold, bought, or trafficked in. Unlawful to set traps during close season.

Propagation. — All protected fur animals may be kept alive in captivity for propagation and sale, provided a license be obtained from the conservation commission (fee, \$5). No fur-bearing animals may be kept which are taken wild during close season for such animals (unless taken under license); nor may they be disposed of during close season. The conservation commission is authorized to issue license to capture animals for propagation; fee for permit, \$1.

Bounties. — Panther, \$20, paid by State; none paid since May, 1884.

NORTH CAROLINA.

[More than half of the 100 counties in the State have local laws relating to fur animals, and information regarding open seasons, license requirements, and

trapping and hunting restrictions may be obtained from the secretary, Audubon Society of North Carolina, Raleigh.]

NORTH DAKOTA.

Open seasons. — Mink and muskrat, November 16 to April 14; otter, no open season; beaver, January 10 to March 10. Only licensed trapper may take beaver, but not upon posted lands. Possession of green hides of mink or muskrat illegal after April 19.

Trapping. — Licenses are required of persons over 16 years of age to trap except on their own lands; fee, resident, \$2; nonresident (mink and muskrat only), \$25. The protected fur animals are mink, muskrat, otter, and beaver; but minks and muskrats may be killed at any time by owner of property destroyed by them. Muskrat houses are protected at all times.

Propagation. — The State game and fish board issues permits (fee, \$5) to breed and domesticate mink, muskrat, skunk, and raccoon, and also permits to sell or ship them when raised in captivity. Under permit from board and \$500 bonds wild fur animals may be taken at any time for breeding purposes. Annual reports are required of licensed breeders.

Bounties. — Wolf or coyote (killed within State), \$2.50 each; paid from fund raised by direct taxation on all property.

OHIO.

Open seasons. — Raccoon, mink, skunk, and opossum, November 1 to February 1; muskrat, December 1 to March 1; fox, October 2 to January 1. Protected animals may be destroyed by owner of premises (except on Sunday) when damaging property.

Trapping. — Hunting and trapping license required; fees, resident, \$1; non-resident, \$15. License not required of owners, managers, tenants, or their children to trap during open season on own land. Written permission from owner or authorized agent required to trap on lands of another. The close season for certain fur animals does not prohibit owners or tenants of land from destroying them to protect property. Digging out dens or smoking, or drowning the animals therefrom is unlawful, as is also the destruction of the house, den, or burrow of any fur animal.

Propagation. — No restrictions, except those which prevent capture of wild stock in close season.

Bounties. — Townships pay a bounty of \$1 each on certain hawks and great-horned owl; 20 cents per dozen on English sparrows; and, under certain conditions, 10 cents each on ground hogs.

OKLAHOMA.

Open seasons. — No open season for otter or beaver. Other fur animals, November 1 to March 1. No open season for bear in Comanche, Caddo, Kiowa, Major, and Blaine Counties.

Trapping. — Unlawful to sell pelts of fur animals taken between March 1 and November 1.

Propagation. — The State game warden issues permits to propagate fur-bearing animals, game, and fish; cost, \$2, together with fees for tagging. Licensed breeders may sell and transport animals raised in preserves under rules prescribed by the warden.

Bounties. — County commissioners are authorized to offer bounty on gray wolf (\$3) and coyote (\$1). Bounties on hawks, crows, etc., paid by counties (not to exceed \$200 a year in any county) are refunded to county from State game fund.

OREGON.

Open seasons. — Mink, otter, fisher, marten, and muskrat, November 1 to February 28, inclusive. No open season for beaver. No open season for fur animals on State game preserve.

Trapping. — License (fee, \$1) is required of all persons over 16 years of age to trap on lands not their own. No flesh of game animal or bird may be used to bait traps. Unlawful to remove or disturb traps of a licensed trapper on public domain or on lands where he has permission to trap. Licensed trappers are required to make annual reports of number of animals caught and receipts for fur sold. If beavers or other fur animals damage property, permits to kill them may be obtained from the State board of fish and game commissioners. Skins of such animals are the property of the State, to be sold and the proceeds used in paying for damage to property. Unlawful to destroy muskrat house, except where it obstructs ditch or water course.

Propagation. — Permits (fee, \$2) to keep fur-bearing animals may be obtained from the State board. No wild fur animals may be taken for propagating purposes in close season nor may those held in captivity under permit be sold in that season. Yearly reports to the State board are required.

Bounties. — Coyote or coyote pup, \$3; adult female, coyote, \$4; gray, black, or timber wolf, or wolf pup, \$2.50; bobcat, wildcat, or lynx, \$2; mountain lion, panther, or cougar, \$10; seal or seal pup, \$2.50; paid by county and half refunded by the State. The State board is empowered to pay additional bounties, at its discretion, on any predatory animal in order to protect game; under this act the State board now pays for wolf, \$20; for cougar, \$15. Several counties are authorized by law to levy a special tax and pay bounties on moles, rabbits, or gophers.

PENNSYLVANIA.

Open seasons. — Bear, October 15 to December 15; raccoon, September 1 to December 31. No open season for beaver. Foxes may not be trapped, shot, snared, or poisoned in Delaware County.

Trapping. — Nonresident trapper requires license (fee, \$10). Unlawful to trap bears, and only one may be killed in a season or three to a camp or body of men. No steel traps larger than No. 3 size may be used for trapping wildcats or other fur animals. Resident requires no license for trapping, but hunting licenses required for killing raccoons or bears, which are regarded as "game" animals (fee, \$1).

Propagation. — No restrictions on raising fur animals, except that possession and breeding of ferrets is unlawful except under license from the State board of game commissioners; fee for license to breed and sell ferrets, \$25; to possess a ferret without breeding, \$1.

Bounties. — Wildcat, \$8; fox, \$2; mink, \$1; weasel, \$2; paid from special fund created by setting aside one-half the receipts by the board of game commissioners from gun licenses, fines, etc.

PORTO RICO.

Porto Rico has no wild fur animals.

RHODE ISLAND.

Open seasons. — Skunk, muskrat, and mink, November 1 to April 15; raccoon, November 1 to February 1. Landowners may kill protected animals on their own lands at any time.

Trapping. — Hunting license is required for trapping, except on one's own lands; fee, resident, \$1; nonresident, \$10; alien, \$15; together with an additional fee of 15 cents for issuing license. Unlawful to trap on posted lands or on lands of another without written permission. Unlawful to set wire snares, or to use steel traps with teeth or with spread over 6 inches, or choke traps with greater opening than 6 inches. Traps must be concealed so as not to endanger domestic animals and must be visited at least once in 24 hours.

Propagation. — No legislation.

Bounties. — Fox, \$3; crow and certain hawks and owls, 25 cents; paid by State.

SOUTH CAROLINA.

Open seasons. — Bear, mink, muskrat, opossum, otter, raccoon, and skunk, October 1 to March 15; fox, September 1 to February 15. Foxes and wildcats may be killed without license at any time by officers of the law and landowners upon their own holdings.

Trapping. — Hunting license required; fees, resident, county license, \$1.10; State, \$3.10; nonresident, \$15.25. No license required of landowner, member of his family or, under his written permission, an employee to take fur animals on own land during open season. Unlawful to hunt on lands of another without consent of owner or manager.

Propagation. — No legislation.

Bounties. — None paid.

SOUTH DAKOTA.

Open seasons. — Mink, muskrat, skunk, from noon December 1 to noon March 1. Otter and beaver, no open season.

Trapping. — Trapping license required of residents over 14 years of age; fee, \$5. No license required of landowners trapping on own lands during open season. Nonresident's trapping license, fee, \$25.

No person shall set or operate more than 75 traps at any one time. Unlawful to shoot muskrats, or to destroy or molest muskrat houses, except they may be opened without injury thereto for the purpose of placing traps therein during open season. Unlawful to buy, sell, ship, or have in possession raw skins of protected fur animals during close season.

Skunk doing damage around buildings may be killed at any time, and, under permit from State game warden, muskrats or beaver damaging irrigation ditches, embankments, or public highways may be taken at any time.

Propagation. — No restrictions, except that protected animals may not be taken for breeding purposes in close season.

Bounties. — Counties shall pay \$4 for coyote and \$8 for wolf, killed within the county.

TENNESSEE.

Open seasons. — For trapping fur bearers off one's own land, from noon October 15 to noon January 15.

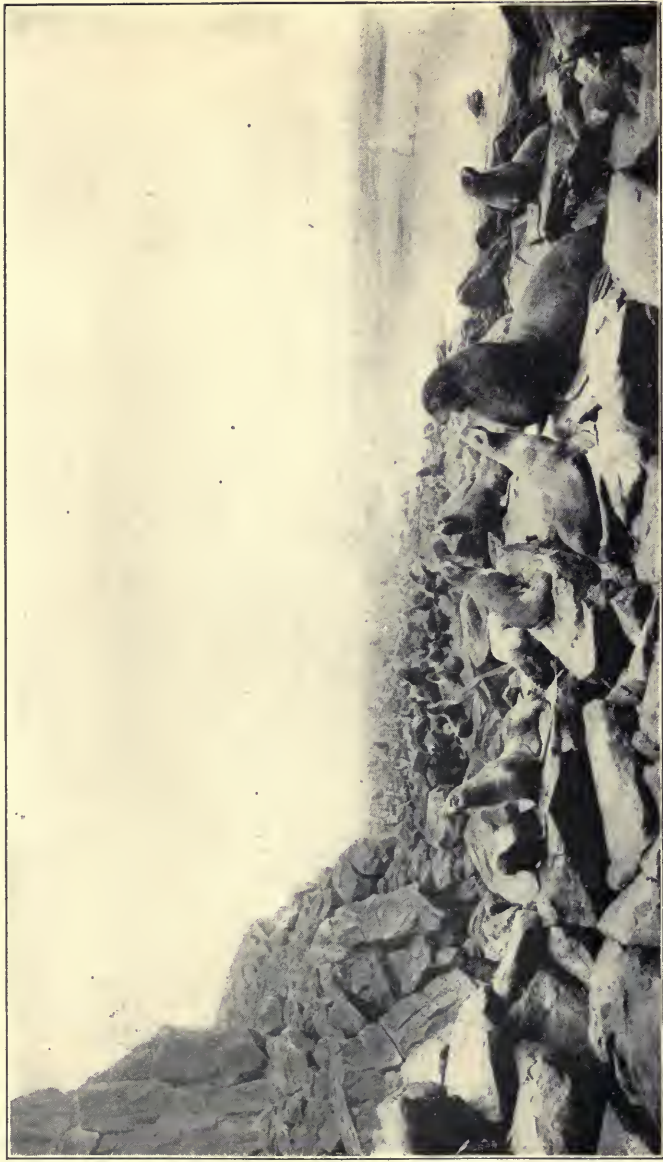
Trapping. — Owner of land may hunt or trap on such land at any time; others may do so only with written consent of owner. Steel traps must be placed at least 12 inches within the entrance to a hole, cave, den, or hollow log. Traps and dead-falls must be inspected within each 36 hours, and captured animals removed; does not apply to trapping wildcats in Lauderdale County.

Propagation. — No legislation.

Bounties. — Wolf or panther, \$2 certificate issued by county court, the amount to be applied on payment of taxes.

Local laws of counties:

Blount County. — Unlawful to shoot fox, to trap or injure young foxes, or to destroy their dens.



In the Museum of the California Academy of Sciences, Golden Gate Park, San Francisco.

Alaska Fur-Seal Group (*Callorhinus Alascensis*).

This shows the North Rookery on St. George Island, Bering Sea. One harem, consisting of one old bull, several cows and their pups, is in the foreground; many others are in the distance. As the seals are polygamous, all the females, but only a small proportion of the males, are saved for breeding purposes; the surplus males are killed on the land by the government for their fur. A very unwise law which prohibited the killing of the useless males in 1912 to 1917 caused an actual money loss to the United States of over \$3,000,000 and very great injury to the herd. Fortunately this closed season has run its disastrous course and killing has been resumed. The herd now (1920) numbers more than 550,000 seals. An average seal skin is worth at least \$100.



Fur Seal Rookery, Pribilof Islands, Alaska.

Carter and Johnson Counties. — Unlawful to trap, shoot, or kill fox or to destroy fox den, except near farm buildings when they destroy fowls or live stock.

Claiborne, Grainger, Davidson, Roane, and Shelby Counties. — Unlawful to set a trap more than 200 yards from trapper's residence.

Davidson, Robertson, and Shelby Counties. — Open season for beaver, muskrat, fox, mink, raccoon, skunk, and opossum, September 1 to January 31. Sale of these animals or their skins restricted to from November 1 to January 31.

Dyer County. — Open season for raccoon, mink, and otter, October 1 to February 15.

Meigs and Rhea Counties. — Same provisions about foxes as in Blount, but also sale of the animals or their pelts is prohibited.

Smith County. — Open season for trapping fur animals, October 15 to February 15.

Warren County. — Open season for opossum, raccoon, and other fur animals, November 1 to February 28 (29).

TEXAS.

Open seasons. — No close season for fur animals.

Trapping. — No license required for trapping, but on posted lands consent of owner is necessary.

Propagation. — Permit must be obtained from game, fish, and oyster commissioner to trap or transport wild animals for propagation purposes.

Bounties. — None paid by State.

UTAH.

Open seasons. — Beaver, otter, and marten protected at all times. If beavers destroy property, the State fish and game commissioner may give permit to kill, but hides must be delivered to the commissioner to be sold, half of the proceeds from the sale of skins of beaver so taken to be paid as compensation for trapping the animals, the balance to be paid into the game fund; possession of skins of protected fur animals prohibited unless duly tagged by commissioner. No close season on other fur animals.

Trapping. — No license required for trapping. Aliens other than homesteaders are not allowed to hunt or trap in the State.

Propagation. — No legislation.

Bounties. — Wolf, \$62.50; bear, mountain lion, or cougar, \$30; coyote, \$4; lynx, or bobcat, \$3. Fund raised by direct appropriation and a tax of 4 mills on live stock.

VERMONT.

Open seasons. — Mink, otter, and muskrat, November 1 to April 30; marten, raccoon, fisher, and skunk, October 20 to March 31; fox, October 20 to April 1 (may be taken otherwise than by trapping at any time). No open season for beaver.

Trapping. — License is required for trapping, except on one's own land; fee, resident, 60 cents; nonresident, \$10.50. Persons trapping on inclosed lands of another must inform owner of location of traps and must visit traps at least once in 24 hours. The use of spring guns is prohibited, and bear traps must be carefully safeguarded. Skins of fur animals legally taken may be bought or sold at any time. Unlawful to open or destroy a muskrat house or to place a trap at its entrance. Unlawful to dig skunks from dens or to drive them out by use of smoke or chemicals.

Propagation. — The State fish and game commissioner issues special permits for propagating fur and game animals (fee, \$2 and expense of tagging). Animals bred on fur farms may be sold and transported alive at all times when bearing the identification tags prescribed by the commissioner.

Bounties. — Black bear taken between May 1 and November 1, \$10; hedgehog (porcupine), 15 cents; paid by State. Towns pay \$5 bounty on bay lynx or bobcat.

Local laws:

Shores of Lake Champlain in Rutland County, Poultney River below Carvers Falls, and shores of Lake Memphremagog in Orleans County. — Open season for mink, muskrat, or otter, January 1 to April 30.

VIRGINIA.

Open seasons. — (Applies to any county adopting the law.) All fur animals on lands of another, noon of October 15 to noon of January 15.

Trapping. — The following applies to any county after adoption by the board of supervisors: Trapping for fur animals on lands of another is unlawful except from noon of October 15 to noon of January 15, and then is lawful only with written permission of landowner, which permission the trapper must have on his person when trapping. He must visit traps at least once in 36 hours and is liable for any damage such traps may do to domestic animals. Landowner may trap or kill fur animals on his own lands at any time.

Propagation. — License required (fee, \$25) to raise game or fur animals.

Bounties. — Boards of supervisors of counties are authorized to pay a bounty of 50 cents each for goshawk and cooper's hawk.

Local trapping regulations. — The following provisions are in force:

Culpeper County. — Unlawful in Jefferson magisterial district to trap foxes except in November and December. Traps set for foxes must be visited daily to release any dog that may be caught.

Fauquier and Loudoun Counties. — Unlawful to take foxes April 1 to August 31, except by owner or tenant of land to protect property. Unlawful in open season to shoot, trap, or poison foxes except on written authority of a landowner.

Fauquier County. — Supervisors may pay 50 cents bounty on goshawk and cooper's hawk, from surplus derived from dog tax.

Halifax County. — Opossum, open season, October 15 to January 31.

King George County. — Muskrat, open season, December 20 to March 31.

Loudoun County. — License (fee, \$2.50) required to trap mink, muskrat, skunk, opossum, and raccoon on lands of another. Open season for mink, muskrat, and skunk, November 1 to February 29; for opossum and raccoon, October 1 to February 29.

Nansemond County. — Mink, otter, and muskrat, open season, January 1 to March 31.

Patrick County. — Wild raccoon or opossum, open season, October 15 to March 14; gray fox, September 15 to March 14.

Princess Anne County. — Unlawful to catch, trap, or kill mink, muskrat, or otter for profit, except from November 1 to March 14.

Rappahannock County. — Unlawful to trap or hunt on lands of another without written permit from owner.

Rockingham County. — Bounty on crows authorized.

Amherst, Essex, King George, and Loudoun Counties are authorized to pay bounty of 50 cents each on certain hawks.

WASHINGTON.

Open seasons. — Bear, September 1 to May 1; at any time when found destroying domestic animals (1917, ch. 164). No open season for beaver. No closed season for other fur animals.

Trapping. — Trapping license (fee, \$5) required. No steel trap larger than No. 4 may be used unless a notice in the English language on a large placard is placed above the trap; this requirement does not apply to trapping coyotes, muskrats, minks, skunks, martens, civet cats, and weasels.

Propagation. — Breeder's license (fee, \$10; renewal, \$5) required.

Bounties. — Mountain lion or cougar, \$20; lynx or wildcat, \$5; coyote, \$1; timber wolf, \$15; seal or sea lion in Columbia River district, \$3; paid by State. Counties are permitted to pay additional rewards for destroying these animals, and also bounties on bear, muskrat, and squirrel.

WEST VIRGINIA.

Open seasons. — Red fox, raccoon, mink, and skunk, November 1 to February 1. Any county may by majority vote provide a perpetual close season on skunk.

Trapping. — Hunting license is required for trapping; fee, resident, \$1; non-resident, \$18. An owner of lands or his agent or tenant may hunt or kill protected fur animals on such lands at any time, but it is unlawful to set or maintain a snare or trap upon lands of another without express permission of owner or tenant. Unlawful to set a steel or spring bear trap on lands of another.

Propagation. — No restriction on possession or sale, but animals may not be taken for breeding purposes in close season except on lands owned or tenanted by the breeder.

Bounties. — Wildcat, bobcat, or catamount, \$5; crow, 10 cents; certain hawks and owls, 25 cents; paid from forest, game, and fish protection fund.

WISCONSIN.

Open seasons. — Beaver in Price, Rusk, and Sawyer Counties, February 1 to March 31 (1919 and 1920); black bear, November 10 to December 1; fisher, marten, mink, and skunk, November 15 to February 1; raccoon, October 15 to January 1 (except Marathon County, August 15 to January 1); bag limit 5 a day; muskrat, in Polk, Barron, Rusk, Price, Lincoln, Langlade, Forest, Marinette, Florence, Iron, Oneida, Vilas, Ashland, Washburn, Sawyer, Burnett, Douglas, and Bayfield Counties, October 25 to April 20; in Calumet, Manitowoc, and Sheboygan Counties, March 1 to April 15; in remainder of State, October 25 to April 10.

Trapping. — License required for trapping; fee, resident, \$1; nonresident, \$25; report required from licensed trapper. Unlawful to take fisher, marten, mink, or muskrat with the aid of spear, gun, or dog; to take rabbit with ferret; to disturb or molest muskrat houses, or beaver houses or beaver dams, or raccoon den trees for the purpose of capturing raccoons; or to set traps within 500 feet of any beaver dam or beaver house. Steel traps may be used for taking fur animals in open season. The possession of green skins of any fur-bearing animal during close season is unlawful, as is also the possession at any time of the skin of a fisher, marten, mink, or muskrat which shows that the animal had been shot or speared.

Owners or lessees of dams may at any time destroy muskrats to protect such dams or levees, but they may not sell, barter, or give away the skins of such animals killed during close season.

Beavers and otters are protected at all times except beavers in 3 counties. If beavers damage property, they may be captured and removed under the direction of the State conservation commission.

Propagation. — Under permit and supervision of the commission wild animals may be taken and transported for propagation within the State. Special license required for muskrat farming (fee, \$5, and 1 cent per acre for all premises in excess of 500 acres covered by the license).

Bounties. — Wolf cub taken between March 1 and November 1, \$4; mature wolf killed at any time, \$10; fox, \$2; paid by county. County boards may increase these rewards, but no county may pay more than \$6 for killing a wolf cub. The State treasurer duplicates all county awards, thus doubling the above bounties. Poisons may be used for destroying animals for bounty between December 1 and March 1, but notice of putting out baits must be posted, and they may not be placed within 80 rods of a dwelling house. County boards may offer bounty on

crow, hen hawk, pocket gopher, streaked gopher, English sparrow, blackbird, or rattlesnake.

WYOMING.

Open seasons. — No close season on fur-bearing animals except beavers, which may not be taken at any time until March 15, 1925, but if they damage real estate the owner may destroy them upon making affidavit to State game warden. Skins of beaver so taken may be possessed when duly tagged by warden.

Trapping. — Unlawful to trap game animals or birds or to use their flesh as trap bait for predatory animals. Unlawful to trap on State game preserves without permit (fee, \$3), and for anyone not employed by the United States Department of Agriculture to trap in national forests within the State without first obtaining a permit (fee, \$3) from the State game warden. Nonresident of State must secure a special license (fee, \$10) to hunt, pursue, or kill bears, but bears may not be trapped under this license. Dog license (fee, \$1 for each dog) required for hunting predatory animals on national forests during close season on big game.

Propagation. — No legislation.

Bounties. — None paid by State.

LAWS OF CANADA.

ALBERTA.

Open seasons. — Mink, fisher, and marten, November 1 to March 31; otter and muskrat, November 1 to April 30. No open season for beaver until December 31, 1920, unless locally by order of the lieutenant governor in council.

Trapping. — Nonresident requires license to trap; fee, \$25. Unlawful to use poison for taking fur-bearing animals; to destroy, partially destroy, or leave open any muskrat or beaver house; or to destroy a beaver dam, unless authorized to do so by the lieutenant governor in council, who may also authorize the killing of beavers or other fur animals when such killing is deemed to be in the public interest. Export of unprime skins or pelts is forbidden, unless by permit from the minister of agriculture. No fox may be trapped or taken alive for export. Every company, firm, or person engaged in the fur trade must make annual returns of the number of skins bought or sold.

Propagation. — Manager of fur farm required to make reports January 1 and July 1 of each year. Export of live animals from fur farms allowed only on permit from the minister of agriculture. Permit, with fees, required to export live muskrats, minks, fishers, martens, otters, or beavers, whether raised on a fur farm or otherwise (orders in council).

Bounties. — The council of any rural municipality is authorized to offer a bounty on wolves.

BRITISH COLUMBIA.

Open seasons. — Bear, September 1 to June 30, except that bear may not be trapped in that part of the Province lying south of the main line of the Canadian Pacific Railway; fox, November 1 to March 15; beaver, no open season; all other fur animals, November 1 to April 30. (See regulations of lieutenant governor in council, dated Aug. 7, 1919, which may be obtained from secretary, game conservation board, Victoria, British Columbia.)

Trapping. — License required to trap off one's own lands; fee, resident only, \$10. A licensed trapper who first occupies a trap line prior to November 14 is protected against other trappers. License must be returned within two months after it expires, with a statement of number of fur animals of each kind taken. It is unlawful to touch or interfere with traps set by a licensed trapper, to trap on enclosed or cultivated land without permission of owner, or to permit traps to remain set after close of season. Possession or export of pelts is allowed only during open season and for two months thereafter (three months, north of fifty-second parallel), except by special permit. Special license to hunt bears from January 1 to July 1 (fee, \$25, and additional fee of \$15 to \$25 for each bear killed) is required of a nonresident.

Propagation. — A permit to propagate fur-bearing animals is required. Breeder must keep a record of transactions as to purchases and sales of stock, which record must be open to inspection of any game warden. Live foxes may be exported only under permit. Permit is required to take foxes or other fur animals in close season.

Bounties. — Rates fixed from time to time by lieutenant governor in council.

MANITOBA.

Open seasons. — *South of fifty-third parallel:* Fisher, pekan, sable, marten, and mink, November 1 to March 31; otter and beaver, no open season; fox and lynx, no close season. *North of fifty-third parallel:* Fisher, pekan, sable, marten, and mink, November 1 to March 31; otter and beaver, November 1 to April 30; fox and lynx, November 1 to February 29.

Muskrat, *south of fifty-first parallel:* March 1 to May 15; *north of fifty-first parallel:* October 20 to November 30, and March 1 to May 15. Unlawful to shoot or spear muskrats.

Trapping. — A license is required to trap; fee, resident, \$2; nonresident, Canadian citizen, \$25; nonresident, alien, \$100. Report giving number of animals of each kind taken under license is required to be made between June 1 and July 1. Persons trading in furs must be licensed (fee, resident, \$10; nonresident, \$50) and are required to make annual returns before September 30. Unlawful to trap in Provincial game preserves, to trap on cultivated or enclosed lands without per-

mission of owner, to destroy a muskrat or beaver house, to use poison in taking fur animals, or to export unprime skins. Poison may not be used to capture wolves for bounty.

Propagation. — No legal restrictions except that a special permit must be obtained to export live fur animals; fee for black or silver fox, \$100; for other fox, \$15; for live otter, \$25; for any other fur animal, \$5.

Bounties. — Timber wolf, \$5; other wolf, \$2; half is refunded to municipality by the Provincial treasurer.

NEW BRUNSWICK.

Open seasons. — Mink, otter, and fisher, November 1 to March 31; fox, October 1 to March 1; muskrat, noon of March 25 to noon of May 15. Beaver and sable, close season to July 1, 1920. The Minister of Lands and Mines, when satisfied that a number of beavers may be taken from any stream without injury to the supply, may issue a special license accompanied by necessary tags, for taking them; fee, \$4 for each animal.

Trapping. — Nonresidents require a license (fee, \$25) for trapping. A license is also required to deal in, buy, sell, cure, or tan the skin of fur-bearing animals (fees, nonresident, \$25; resident, \$2). The digging out of foxes from their homes or earth burrows is prohibited at all times. Unlawful to possess green skins or carcasses of protected fur animals in close season.

Propagation. — Permits to capture wild fur-bearing animals for propagation within the Province may be obtained from the Minister of Lands and Mines, who fixes the fee for such permit.

Bounties. — Wildcat (killed within the Province), \$3; porcupine, 50 cents; hawks and owls, 25 cents each; paid by the Minister of Lands and Mines.

NORTH-WEST TERRITORIES.

Open seasons. — Mink, fisher, and marten, November 1 to March 14; otter, beaver, and muskrat, October 1 to May 14; white fox, November 15 to March 31. Trapping prohibited on Victoria Island.

Trapping. — License required of all trappers except native Indians; fee, resident, \$2; nonresident, British subject, \$25; other nonresident, \$50. Licensed trapper may sell or trade the skins of animals he has legally taken. License (fee, \$5) required for trading or trafficking in furs. Unlawful to destroy or injure any beaver or muskrat house. Use of poison prohibited in taking fur animals. Export of unprime or low-grade furs forbidden.

Propagation. — Permits may be obtained to take live fur animals for propagation.

Bounties. — Timber wolf, \$20.

NOVA SCOTIA.

Open seasons. — No open season for beaver or marten. Mink, otter, fox, raccoon, muskrat, and all other fur-bearing animals (except bear, wolf, and wild-cat, which are not protected), November 1 to January 31.

Trapping. — Nonresident requires a license (fee, \$30) to take fur-bearing animals, which are included in the term "game." Unlawful to take any protected fur animal (unless under a permit) from a burrow or den by smoking or digging; to take fur animal by use of poison; to damage or molest a beaver dam or house, or a muskrat house, or set snare or trap within 25 feet of the latter; or to have in possession the green hide or pelt of a fur animal taken out of season.

Propagation. — Permits to take wild animals may be obtained from the board of game commissioners under such restrictions as they may require. Unlawful to keep fur-bearing animals in captivity for breeding purposes without a permit from the chief game commissioner; fee, \$2 for each kind of animal kept, payable annually. Reports are required annually on September 30. Enclosures for fur animals are protected from trespass.

Bounties. — None paid.

ONTARIO.

Open seasons. — Mink, fisher, and marten, November 1 to April 30; muskrat, north of French and Mattawa Rivers, April 1 to May 20; south of said rivers, March 1 to April 20. Beavers and otters may be taken by residents of the Province only, under license and special restrictions, from November 1 to March 31.

Trapping. — License to trap required except to take wolf and fox or for farmers and their sons to trap on own land; fee, resident, \$5; nonresident, \$50. License (fee for resident and British subject, \$10; for alien, \$25) is required of all fur dealers or traders. Dealers may obtain a permit to hold furs during close season. Possession of unprime skins is illegal. Muskrats may not be shot or speared at any time. Muskrat houses are protected at all times except when the animals are injuring property. Beavers, when damaging property, may be destroyed by game overseer under special authorization from the department of game and fisheries.

Propagation. — A permit is required of breeders of game or fur animals. Licensed fur breeders may sell live animals or skins during open season upon payment of royalties. The Minister may grant permits to take fur animals during the close season for propagating and scientific purposes.

Bounties. — Gray timber wolf, \$20; other wolf, \$5; paid by county, but Provincial treasurer refunds 40 per cent to county. Provincial treasurer pays entire bounty in unorganized counties.

PRINCE EDWARD ISLAND.

(1919 laws not received.)

Open seasons. — Marten, mink, muskrat, and otter, November 1 to March 31; beaver, no open season, and the animals or their pelts taken in the Province may not be sold.

Trapping. — Nonresident requires license (fee, \$50) for trapping. Unlawful to put out poisoned baits for foxes or other animals.

Propagation. — Several special acts of the Provincial legislature regulate fox ranching on the island. The animals are assessed for taxation; ranches are protected from trespass, under heavy penalties; and incomes from ranches are taxed.

Bounties. — None paid.

SASKATCHEWAN.

Open seasons. — Mink, fisher, and marten, November 1 to March 31; otter and muskrat, November 1 to April 30; fox, north of township 50, November 1 to March 31; beaver, December 1 to April 30 (except on game preserves and where protected by municipality).

Trapping. — Nonresident requires license (fee, \$25) to trap. Unlawful to trap on game refuges or on enclosed or cultivated lands of another without consent of owner or occupant; to use poison for taking fur animals; to spear or shoot muskrats, or to destroy muskrat houses; to buy, sell, ship, or possess unprime furs; to buy or sell furs without license (fees: residents north of township 25, \$10; south of township 26, \$2; nonresidents, \$25); and to ship any fur animal in concealed receptacle. Licensed fur traders must make annual report of operations.

Propagation. — Permit required (fee, \$1 annually) to operate a fur ranch. Permit to ship live fur animals is required; fee, for black or silver fox, \$25; for cross or red fox, \$5; for other fur animal, \$5. Young foxes may not be taken from dens before May 15.

Bounties. — Adult timber wolf, \$10; pups of prairies or timber wolf, \$1; paid only in properly gazetted wolf districts, when half is refunded from Provincial treasury.

QUEBEC.

Open seasons. — Mink, otter, marten, fisher (pekan), raccoon, skunk, or any other fur-bearing animal not excepted in this article, November 1 to March 31; beaver, November 1 to March 31; muskrat, March 15 to April 30; fox, November 1 to February 29; bear, August 20 to June 30.

Trapping. — Use of poisons in taking fur animals prohibited. Reports are required of all persons engaged in the fur trade (buying, selling, or taking fur

animals) before September 1 of each year. Royalties must be paid on fur animals or furs shipped out of the Province.

Propagation. — The minister of colonization, mines, and fisheries may grant permits to take animals alive for breeding purposes; nonresidents are charged a fee of from \$5 to \$25 for such license.

Bounties. — Wolf, \$15.

YUKON.

Open seasons. — Beaver protected at all seasons. No close season for other fur animals, except young foxes; these may not be taken from April 1 to May 31. Unlawful to export raw furs from territory except under permit issued by direction of the commissioner, and upon payment of the export tax.

Trapping. — Use of poison in taking animals forbidden.

Propagation. — No restrictions other than as to foxes. Registration of fox breeders required. Unlawful to export a fox not born in captivity or which has been in captivity for less than a year; any fox born in captivity may be exported under a permit (fee, \$5). Fox and other fur ranches, if posted against trespass, may not be approached without owner's consent.

Bounties. — None paid.

LAWS OF NEWFOUNDLAND.

Open seasons. — Otter, marten, and lynx, October 1 to March 31; fox, October 16 to March 14; muskrat, October 1 to April 30. No open season for beaver until October 1, 1920.

Trapping. — Nonresident trappers require annual license; fee, \$501. Fur buyers and shippers also require annual license (fee, 50 cents), and must report operations under same before December 31 of each year. Trapping on Grand Lake Caribou Preserve is unlawful at all times.

Propagation. — No restrictions, except as to foxes. A fox farm must be licensed; the owner must at stated times make reports to the game and inland fisheries board, and the premises must be at all times open to inspection by officers of the board. Possession of fox cub or fox taken in close season is prohibited. Unlawful to export a fox not bred on a fox farm, or, without permit from the colonial board, to export a fox bred in captivity.

Bounties. — None paid.

PART II

CHAPTER I

THE TAKING OF THE BEAVER

ALL summer long he had hung about the fur company trading-posts waiting for the signs.

And now the signs had come.

Foliage crimson to the touch of night-frosts. Crisp autumn days, spicy with the smell of nuts and dead leaves. Birds flying away southward, leaving the woods silent as the snow-padded surface of a frozen pond. Hoar-frost heavier every morning; and thin ice edged round stagnant pools like layers of mica.

Then he knew it was time to go. And through the Northern forests moved a new presence — the trapper.

Of the tawdry, flash clothing in which popular fancy is wont to dress him he has none. Bright colors would be a danger-signal to game. If his costume has any color, it is a waist-belt or neck-scarf, a toque or bright handkerchief round his head to keep distant hunters from mistaking him for a moose. For the rest, his clothes are as ragged as any old, weather-worn garments. Sleeping on balsam boughs or cooking over a smoky fire will reduce the newness of blanket coat and buckskin jacket to the dun shades of the grizzled forest. A few days in the open and the trapper has the complexion of a bronzed tree-trunk.

Like other wild creatures, this foster-child of the forest gradually takes on the appearance and habits of woodland life. Nature protects the ermine by turning his russet coat of the grass season to spotless white for midwinter — except the jet tail-tip left to lure hungry enemies and thus, perhaps, to prevent the little stoat degenerating into a sloth. And the forest looks after her foster-

child by transforming the smartest suit that ever stepped out of the clothier's bandbox to the dull tints of winter woods.

This is the seasoning of the man for the work. But the trapper's training does not stop here.

When the birds have gone South the silence of a winter forest on a windless day becomes tense enough to be snapped by either a man's breathing or the breaking of a small twig; and the trapper acquires a habit of moving through the brush with noiseless stealth. He must learn to see better than the caribou can hear or the wolf smell — which means that in keenness and accuracy his sight out-distances the average field-glass. Besides, the trapper has learned how to look, how to see, and seeing — discern; which the average man cannot do even through a field-glass. Then animals have a trick of deceiving the enemy into mistaking them for inanimate things by suddenly standing stock-still in closest peril, unflinching as stone; and to match himself against them the trapper must also get the knack of instantaneously becoming a statue, though he feel the clutch of bruin's five-inch claws.

And these things are only the *a b c* of the trapper's woodcraft.

One of the best hunters in America confessed that the longer he trapped the more he thought every animal different enough from the fellows of its kind to be a species by itself. Each day was a fresh page in the book of forest lore.

It is in the month of May-goosey-geezee, the Ojibways' trout month, corresponding to the late October and early November of the white man, that the trapper sets out through the illimitable stretches of the forest land and waste prairie south of Hudson Bay, between Labrador and the Upper Missouri.

His birch canoe has been made during the summer. Now, splits and seams, where the bark crinkles at the gunwale, must be filled with rosin and pitch. A light sled, with only runners and cross frame, is made to haul the canoe over still water, where the ice first forms. Sled, provisions, blanket, and fish-net are put in the canoe, not forgetting the most important part of his kit — the

trapper's tools. Whether he hunts from point to point all winter, travelling light and taking nothing but absolute necessities, or builds a central lodge, where he leaves full store and radiates out to the hunting-grounds, at least four things must be in his tool-bag: a woodman's axe; a gimlet to bore holes in his snow-shoe frame; a crooked knife — not the sheathed dagger of fiction, but a blade crooked hook-shape, somewhat like a farrier's knife, at one end — to smooth without splintering, as a carpenter's plane; and a small chisel to use on the snow-shoe frames and wooden contrivances that stretch the pelts.

If accompanied by a boy, who carries half the pack, the hunter may take more tools; but the old trapper prefers to travel light. Firearms, ammunition, a common hunting-knife, steel traps, a cotton-factory tepee, a large sheet of canvas, locally known as *abuckwan*, for a shed tent, complete the trapper's equipment. His dog is not part of the equipment: it is fellow-hunter and companion.

From the moose must come the heavy filling for the snow-shoes; but the snow-shoes will not be needed for a month, and there is no haste about shooting an unfound moose while mink and muskrat and otter and beaver are waiting to be trapped. With the dog showing his wisdom by sitting motionless as an Indian bowman, the trapper steps into his canoe and pushes out.

Eye and ear alert for sign of game or feeding-place, where traps would be effective, the man paddles silently on. If he travels after nightfall, the chances are his craft will steal unawares close to a black head above a swimming body. With both wind and current meeting the canoe, no suspicion of his presence catches the scent of the sharp-nosed swimmer. Otter or beaver, it is shot from the canoe. With a leap over bow or stern — over his master's shoulder if necessary, but never sideways, lest the rebound cause an upset — the dog brings back his quarry. But this is only an aside, the haphazard shot of an amateur hunter, not the sort of trapping that fills the company's lofts with fur bales.

While ranging the forest the former season the trapper picked out a large birch-tree, free of knots and underbranching, with the full girth to make the body of a canoe from gunwale to gunwale without any gussets and seams. But birch-bark does not peel well in winter. The trapper scratched the trunk with a mark of "first-finder-first-owner," honored by all hunters; and came back in the summer for the bark.

Perhaps it was while taking the bark from this tree that he first noticed the traces of beaver. Channels, broader than runnels, hardly as wide as a ditch, have been cut connecting pool with pool, marsh with lake. Here are runways through the grass, where beaver have dragged young saplings five times their own length to a winter storehouse near the dam. Trees lie felled miles away from any chopper. Chips are scattered about marked by teeth which the trapper knows — knows, perhaps, from having seen his dog's tail taken off at a nip, or his own finger amputated almost before he felt it. If the bark of a tree has been nibbled around, like the line a chopper might make before cutting, the trapper guesses whether his coming has not interrupted a beaver in the very act.

All these are signs which spell out the presence of a beaver-dam within one night's travelling distance; for the timid beaver frequently works at night, and will not go so far away that forage cannot be brought in before daylight. In which of the hundred water-ways in the labyrinth of pond and stream where beavers roam is this particular family to be found?

Realizing that his own life depends on the life of the game, no true trapper will destroy wild creatures when the mothers are caring for their young. Besides, furs are not at their prime when birch-bark is peeled, and the trapper notes the place, so that he may come back when the fall hunt begins. Beaver kittens stay under the parental roof for three years, but at the end of the first summer are amply able to look after their own skins. Free from nursery duties, the old ones can now use all the ingenuity and craft



Polar White Fox and Arctic Hare.

American Museum Natural History.



Wolverine.

Courtesy Hudson Bay Company.

which nature gave them for self-protection. When cold weather comes the beaver is fair game to the trapper. It is wit against wit. To be sure, the man has superior strength, a gun, and a treacherous thing called a trap. But his eyes are not equal to the beaver's nose. And he hasn't that familiarity with the woods to enable him to pursue, which the beaver has to enable it to escape. And he can't swim long enough under water to throw enemies off the scent, the way the beaver does.

Now, as he paddles along the network of streams which interlace Northern forests, he will hardly be likely to stumble on the beaver-dam of last summer. Beavers do not build their houses where passers-by will stumble upon them. But all the streams have been swollen by fall rains; and the trapper notices the markings on every chip and pole floating down the full current. A chip swirls past white and fresh cut. He knows that the rains have floated it over the beaver-dam. Beavers never cut below their houses, but always above, so that the current will carry the poles downstream to the dam.

Leaving his canoe-load behind, the trapper guardedly advances within sight of the dam. If any old beaver sentinel be swimming about, he quickly scents the man-smell, upends and dives with a spanking blow of his trowel tail on the water, which heliographs danger to the whole community. He swims with his webbed hind feet, the little fore paws being used as carriers or hanging limply, the flat tail acting the faintest bit in the world like a rudder; but that is a mooted question. The only definitely ascertained function of that bat-shaped appendage is to telegraph danger to comrades. The beaver neither carries things on his tail, nor plasters houses with it; for the simple reason that the joints of his caudal appurtenance admit of only slight sidelong wiggings and a forward sweep between his hind legs, as if he might use it as a tray for food while he sat back spooning up mouthfuls with his fore paws.

Having found the wattled homes of the beaver, the trapper may proceed in different ways. He may, after the fashion of the Indian

hunter, stake the stream across above the dam, cut away the obstruction, lowering the water, break the conical crowns of the houses on the south side, which is thinnest, and slaughter the beavers indiscriminately as they rush out. But such hunting kills the goose that lays the golden egg; and explains why it was necessary to prohibit the killing of beaver for some years. In the confusion of a wild scramble to escape and a blind clubbing of heads there was bootless destruction. Old and young, poor and in prime, suffered the same fate. The house had been destroyed; and if one beaver chanced to escape into some of the bank-holes under water or up the side channels, he could be depended upon to warn all beaver from that country. Only the degenerate white man practises bad hunting.

The skilled hunter has other methods.

If unstripped saplings be yet about the bank of the stream, the beavers have not finished laying up their winter stores in adjacent pools. The trapper gets one of his steel traps. Attaching the ring of this to a loose trunk heavy enough to hold the beaver down and drown him, he places the trap a few inches under water at the end of a runway or in one of the channels. He then takes out a bottle of castoreum. This is a substance from the glands of a beaver which destroys all traces of the man-smell. For it the beavers have a curious infatuation, licking everything touched by it, and said, by some hunters, to be drugged into a crazy stupidity by the very smell. The hunter daubs this on his own foot-tracks.

Or, if he finds tracks of the beaver in the grass back from the bank, he may build an old-fashioned deadfall, with which the beaver is still taken in Labrador. This is the small lean-to, with a roof of branches and bark — usually covered with snow — slanting to the ground on one side, the ends either posts or logs, and the front an opening between two logs wide enough to admit half the animal's body. Inside, at the back, on a rectangular stick, one part of which bolsters up the front log, is the bait. All traces of the hunter are smeared over with the elusive castoreum. One tug

at the bait usually brings the front log crashing down across the animal's back, killing it instantly.

But neither the steel trap nor the deadfall is wholly satisfactory. When the poor beaver comes sniffing along the castoreum trail to the steel trap and on the first splash into the water feels a pair of iron jaws close on his feet, he dives below to try to gain the shelter of his house. The log plunges after him, holding him down and back till he drowns; and his whereabouts is revealed by the up-end of the tree.

But several chances are in the beaver's favor. With the castoreum licks, which tell them of some other beaver, perhaps looking for a mate or lost cub, they may become so exhilarated as to jump clear of the trap. Or, instead of diving down with the trap, they may retreat back up the bank and amputate the imprisoned foot with one nip, leaving only a mutilated paw for the hunter. With the deadfall a small beaver may have gone entirely inside the snare before the front log falls; and an animal whose teeth saw through logs eighteen inches in diameter in less than half an hour can easily eat a way of escape from a wooden trap. Other things are against the hunter. A wolverine may arrive on the scene before the trapper and eat the finest beaver ever taken; or the trapper may discover that his victim is a poor little beaver with worthless, ragged fur, which should have been left to forage for three or four years.

All these risks can be avoided by waiting till the ice is thick enough for the trapper to cut trenches. Then he returns with a woodman's axe and his dog. By sounding the ice, he can usually find where holes have been hollowed out of the banks. Here he drives stakes to prevent the beaver taking refuge in the shore vaults. The runways and channels, where the beaver have dragged trees, may be hidden in snow and iced over; but the man and his dog will presently find them.

The beaver always chooses a stream deep enough not to be frozen solid, and shallow enough for it to make a mud foundation for the house without too much work. Besides, in a deep, swift

stream, rains would carry away any house the beaver could build. A trench across the upper stream or stakes through the ice prevent escape that way.

The trapper then cuts a hole in the dam. Falling water warns the terrified colony that an enemy is near. It may be their greatest foe, the wolverine, whose claws will rip through the frost-hard wall as easily as a bear delves for gophers; but their land enemies cannot pursue them into water; so the panic-stricken family — the old parents, wise from many such alarms; the young three-year-olds, who were to go out and rear families for themselves in the spring; the two-year-old cubbies, big enough to be saucy, young enough to be silly; and the baby kittens, just able to forage for themselves and know the soft alder rind from the tough old bark unpalatable as mud — pop pell-mell from the high platform of their houses into the water. The water is still falling. They will presently be high and dry. No use trying to escape upstream. They see that in the first minute's wild scurry through the shallows. Besides, what's this across the creek? Stakes, not put there by any beaver; for there is no bark on. If they only had time now they might cut a passage through; but no — this wretched enemy, whatever it is, has ditched the ice across.

They sniff and listen. A terrible sound comes from above — a low, exultant, devilish whining. The man has left his dog on guard above the dam. At that the little beavers — always trembling, timid fellows — tumble over each other in a panic of fear to escape by way of the flowing water below the dam. But there a new terror assails them. A shadow is above the ice, a wraith of destruction — the figure of a man standing at the dam with his axe and club — waiting.

Where to go now? They can't find their bank shelters, for the man has staked them up. The little fellows lose their presence of mind and their heads and their courage, and with a blind scramble dash up the remaining open runway. It is a *cul-de-sac*. But what does that matter? They run almost to the end. They can crouch

there till the awful shadow goes away. Exactly. That is what the man has been counting on. He will come to them afterward.

The old beavers make no such mistake. They have tried the hollow-log trick with an enemy pursuing them to the blind end, and have escaped only because some other beaver was eaten.

The old ones know that water alone is safety.

That is the first and last law of beaver life. They, too, see that phantom destroyer above the ice; but a dash past is the last chance. How many of the beaver escape past the cut in the dam to the water below depends on the dexterity of the trapper's aim. But certainly for the most, one blow is the end; and that one blow is less cruel to them than the ravages of the wolf or wolverine in spring, for these begin to eat before they kill.

A signal, and the dog ceases to keep guard above the dam. Where is the runway in which the others are hiding? The dog scampers round aimlessly, but begins to sniff and run in a line and scratch and whimper. The man sees that the dog is on the trail of sagging snow, and the sag betrays ice settling down where a channel has run dry. The trapper cuts a hole across the river end of the runway and drives down stakes. The young beavers are now prisoners.

The human mind can't help wondering why the foolish youngsters didn't crouch below the ice above the dam and lie there in safe hiding till the monster went away. This may be done by the hermit beavers — fellows who have lost their mates and go through life inconsolable; or sick creatures, infested by parasites and turned off to house in the river holes; or fat, selfish ladies, who don't want the trouble of training a family. Whatever these solitaries are — naturalists and hunters differ — they have the wit to keep alive; but the poor little beavers rush right into the jaws of death. Why do they? For the same reason probably, if they could answer, that people trample each other to death when there is an alarm in a crowd.

They cower in the terrible pen, knowing nothing at all about their hides being valued all the way from fifty cents to \$20, according to the quality; nothing about the dignity of being a coin of the realm in the Northern wilderness, where one beaver skin sets the value for mink, otter, marten, bear, and all other skins, one pound of tobacco, one kettle, five pounds of shot, a pint of brandy, and half a yard of cloth; nothing about the rascally Indians long ago bartering forty of their hides for a scrap of iron and a great company sending one hundred thousand beaver skins in a single year to make hats and cloaks for the courtiers of Europe; nothing about the laws of man forbidding the killing of beaver till their number increase.

All the little beaver remembers is that it opened its eyes to daylight in the time of soft, green grasses; and that as soon as it got strong enough on a milk diet to travel, the mother led the whole family of kittens—usually three or four—down the slanting doorway of their dim house for a swim; and that she taught them how to nibble the dainty, green shrubs along the bank; and then the entire colony went for the most glorious, pell-mell splash upstream to fresh ponds. No more sleeping in that stifling lodge; but beds in soft grass like a goose-nest all night, and tumbling in the water all day, diving for the roots of the lily-pads. But the old mother is always on guard, for the wolves and bears are ravenous in spring. Soon the cubs can cut the hardening bark of alder and willow as well as their two-year-old brothers; and the wonderful thing is—if a tooth breaks, it grows into perfect shape.

By August the little fellows are great swimmers, and the colony begins the descent of the stream for their winter home. If unmolested, the old dam is chosen; but if the hated man-smell is there, new water-ways are sought. Burrows and washes and channels and retreats are cleaned out. Trees are cut and a great supply of branches laid up for winter store near the lodge, not a chip of edible bark being wasted. Just before the frost they begin building or repairing the dam. Each night's frost hardens the

plastered clay till the conical wattled roof — never more than two feet thick — will support the weight of a moose.

All work is done with mouth and fore paws, and not the tail. This has been finally determined by observing the Marquis of Bute's colony of beavers. If the family — the old parents and three seasons' offspring — be too large for the house, new chambers are added. In height the house is seldom more than five feet from the base, and the width varies. In building a new dam they begin under water, scooping out clay, mixing this with stones and sticks for the walls, and hollowing out the dome as it rises, like a cofferdam, except that man pumps out water and the beaver scoops out mud. The domed roof is given layer after layer of clay till it is cold-proof. Whether the houses have one door or two is disputed; but the door is always at the end of a sloping incline away from the land side, with a shelf running round above, which serves as the living-room. Differences in the houses, breaks below water, two doors instead of one, platforms like an oven instead of a shelf, are probably explained by the continual abrasion of the current. By the time the ice forms, the beavers have retired to their houses for the winter, only coming out to feed on their winter stores and get an airing.

But this terrible thing has happened; and the young beavers huddle together under the ice of the canal, bleating with the cry of a child. They are afraid to run back; for the crunch of feet can be heard. They are afraid to go forward; for the dog is whining with a glee that is fiendish to the little beavers. Then a gust of cold air comes from the rear and a pole prods forward.

The man has opened a hole to feel where the hiding beavers are, and with little terrified yelps they scuttle to the very end of the runway. By this time the dog is emitting howls of triumph. For hours he has been boxing up his wolfish ferocity, and now he gives vent by scratching with a zeal that would burrow to the middle of earth.

The trapper drives in more stakes close to the blind end of the

channel, and cuts a hole above the prison of the beavers. He puts down his arm. One by one they are dragged out by the tail; and that finishes the little beaver — sacrificed, like the guinea-pigs and rabbits of bacteriological laboratories, to the necessities of man. Only, this death is swifter and less painful. A prolonged death struggle with the beaver would probably rob the trapper of half his fingers. Very often the little beavers with poor fur are let go. If the dog attempts to capture the frightened runaways by catching at the conspicuous appendage to the rear, that dog is likely to emerge from the struggle minus a tail, while the beaver runs off with two.

Trappers have curious experiences with beaver kittens which they take home as pets. When young they are as easily domesticated as a cat, and become a nuisance with their love of fondling. But to them, as to the hunter, comes what the Indians call "the-sickness-of-long-thinking," the gypsy yearning for the wilds. Then extraordinary things happen. The beavers are apt to avenge their comrades' death. One old beaver trapper of New Brunswick related that by June the beavers became so restless, he feared their escape and put them in cages. They bit their way out with absurd ease.

He then tried log pens. They had eaten a hole through in a night. Thinking to get wire caging, he took them into his lodge, and they seemed contented enough while he was about; but one morning he awakened to find a hole eaten through the door, and the entire round of birch-bark, which he had staked out ready for the gunwales and ribbing of his canoe — bark for which he had travelled forty miles — chewed into shreds. The beavers had then gone upstream, which is their habit in spring.

CHAPTER II

THE MAKING OF THE MOCCASINS

It is a grim joke of the animal world that the lazy moose is the moose that gives wings to the feet of the pursuer. When snow comes the trapper must have snow-shoes and moccasins. For both, moose supplies the best material.

Bees have their drones, beaver their hermits, and moose a ladyfied epicure who draws off from the feeding-yards of the common herd, picks out the sweetest browse of the forest, and gorges herself till fat as a gouty voluptuary. While getting the filling for his snow-shoes, the trapper also stocks his larder; and if he can find a spinster moose, he will have something better than shredded venison and more delicately flavored than finest teal.

Sledding his canoe across shallow lakelets, now frozen like rock, still paddling where there is open way, the trapper continues to guide his course up the water-ways. Big game, he knows, comes out to drink at sunrise and sunset; and nearly all the small game frequents the banks of streams either to fish or to prey on the fisher.

Each night he sleeps in the open with his dog on guard; or else puts up the cotton tepee, the dog curling outside the tent flap, one ear awake. And each night a net is set for the whitefish that are to supply breakfast, feed the dog, and provide heads for the traps placed among rocks in midstream, or along banks where dainty footprints were in the morning's hoar-frost. Brook trout can still be got in the pools below waterfalls; but the trapper seldom takes time now to use the line, depending on his gun and fish-net.

During the Indian's whitefish month — the white man's

November — the weather has become colder and colder; but the trapper never indulges in the big log fire that delights the heart of the amateur hunter. That would drive game a week's tracking from his course. Unless he wants to frighten away nocturnal prowlers, a little chip fire, such as the fishermen of the Banks use in their dories, is all the trapper allows himself.

First snow silences the rustling leaves. First frost quiets the flow of waters. Except for the occasional splitting of a sap-frozen tree, or the far howl of a wolf-pack, there is the stillness of death. And of all quiet things in the quiet forest, the trapper is the quietest.

As winter closes in the ice-skim of the large lakes cuts the bark canoe like a knife. The canoe is abandoned for snow-shoes and the cotton tepee for more substantial shelter.

If the trapper is a white man he now builds a lodge near the best hunting-ground he has found. Around this he sets a wide circle of traps at such distances their circuit requires an entire day, and leads the trapper out in one direction and back in another, without retracing the way. Sometimes such lodges run from valley to valley. Each cabin is stocked; and the hunter sleeps where night overtakes him. But this plan needs two men; for if the traps are not closely watched, the wolverine will rifle away a priceless fox as readily as he eats a shabby muskrat. The stone fireplace stands at one end. Moss, clay, and snow chink up the logs. Parchment across a hole serves as window. Poles and brush make the roof, or perhaps the remains of the cotton tent stretched at a steep angle to slide off the accumulating weight of snow.

But if the trapper is an Indian, or the white man has a messenger to carry the pelts marked with his name to a friendly trading-post, he may not build a lodge; but move from hunt to hunt as the game changes feeding-ground. In this case he uses the *abuckwan* — canvas — for a shed tent, with one side sloping to the ground, banked by brush and snow, the other facing the fire, both tent and fire on such a slope that the smoke drifts out while the heat reflects in. Pine and balsam boughs, with the wood end pointing

out like sheaves in a stook, the foliage converging to a soft centre, form the trapper's bed.

The snow is now too deep to travel without snow-shoes. The frames for these the trapper makes of ash, birch, or best of all, the *mackikwatick* — tamarack — curving the easily bent green wood up at one end, canoe shape, and smoothing the barked wood at the bend, like a sleigh runner, by means of the awkward *couteau croche*, as the French hunter calls his crooked knife.

In style, the snow-shoe varies with the hunting-ground. On forested, rocky, hummocky land, the shoe is short to permit short turns without entanglement. Oval and broad, rather than long and slim, it makes up in width what it lacks in length to support the hunter's weight above the snow. And the toe curve is slight; for speed is impossible on bad ground. To save the instep from jars, the slip noose may be padded like a cowboy's stirrup.

On the prairie, where the snowy reaches are unbroken as air, snow-shoes are wings to the hunter's heels. They are long, and curved, and narrow, and smooth enough on the runners for the hunter to sit on their rear ends and coast downhill as on a toboggan. If a snag is struck midway, the racquets may bounce safely over and glissade to the bottom; or the toe may catch, heels fly over head, and the hunter land with his feet noosed in frames sticking upright higher than his neck.

Any trapper can read the story of a hunt from snow-shoes. Round and short: east of the Great Lakes. Slim and long: from the prairie. Padding for the instep: either rock ground or long runs. Filling of hide strips with broad enough interspaces for a small foot to slip through: from the wet, heavily packed, snow region of the Atlantic Coast, for trapping only, never the chase, small game, not large. Lace ties, instead of a noose to hold the foot: the amateur hunter. *Atibisc*, a fine filling taken from deer or caribou for the heel and toe; with *askimoneiab*, heavy, closely interlaced, membranous filling from the moose across the centre to bear the brunt of wear; long enough for speed, short

enough to turn short: the trapper knows he is looking at the snow-shoe of the craftsman. This is the sort he must have for himself.

The first thing, then — a moose for the heavy filling; preferably a spinster moose; for she is too lazy to run from a hunter who is not yet a Mercury; and she will furnish him with a banquet fit for kings.

Neither moose call nor birch horn, of which wonders are told, will avail now. The mating season is well past. Even if an old moose responded to the call, the chances are his flesh would be unfit for food. It would be a wasted kill, contrary to the principles of the true trapper.

Every animal has a sign language as plain as print. The trapper has hardly entered the forest before he begins to read this language. Broad hoof-marks are on the muskeg — quaking bog, covered with moss — over which the moose can skim as if on snow-shoes, where a horse would sink to the saddle. Park-like glades at the heads of streams, where the moose have spent the summer browsing on twigs and wallowing in water holes to get rid of sand flies, show trampled brush and stripped twigs and rubbed bark.

Coming suddenly on a grove of quaking aspens, a saucy jay has fluttered up with a noisy call — an alarm note; and something is bounding off to hiding in a thicket on the far side of the grove. The *wis-kat-jan*, or whiskey jack, as the white men call it, who always hangs about the moose herds, has seen the trapper and sounded the alarm.

In August, when the great, palmated horns, which budded out on the male in July, are yet in the velvet, the trapper finds scraps of furry hair sticking to young saplings. The vain moose has been polishing his antlers, preparatory to mating. Later, there is a great whacking of horns among the branches. The moose, spoiling for a fight, in moose language is challenging his

rivals to battle. Wood-choppers have been interrupted by the apparition of a huge, palmed head through a thicket. Mistaking the axe for his rival's defiance, the moose arrives on the scene in a mood of blind rage that sends the chopper up a tree, or back to the shanty for his rifle.

But the trapper allows these opportunities to pass. He is not ready for his moose until winter compels the abandoning of the canoe. Then the moose herds are yarding up in some sheltered feeding-ground.

It is not hard for the trapper to find a moose yard. There is the tell-tale cleft footprint in the snow. There are the cast-off antlers after the battles have been fought — the female moose being without horns and entirely dependent on speed and hearing and smell for protection. There is the stripped, overhead twig, where a moose has reared on hind legs and nibbled a branch above. There is the bent or broken sapling which a moose pulled down with his mouth and then held down with his feet while he browsed. This and more sign language of the woods — too fine for the language of man — lead the trapper close on the haunts of a moose herd. But he does not want an ordinary moose. He is keen for the solitary track of a haughty spinster. And he probably comes on the print when he has almost made up his mind to chance a shot at one of the herd below the hill, where he hides. He knows the trail is that of a spinster. It is unusually heavy; and she is always fat. It drags clumsily over the snow; for she is lazy. And it doesn't travel straight away in a line like that of the roving moose; for she loiters to feed and dawdle out of pure indolence.

And now the trapper knows how a hound on a hot scent feels. He may win his prize with the ease of putting out his hand and taking it — sighting his rifle and touching the trigger. Or, by the blunder of a hair's breadth, he may daily track twenty weary miles for a week and come back empty at his cartridge-belt, empty below his cartridge-belt, empty of hand, and full, full of rage at himself, though his words curse the moose. He may win his prize

in one of two ways: (1) by running the game to earth from sheer exhaustion; (2) or by a still hunt.

The straightaway hunt is more dangerous to the man than the moose. Even a fat spinster can outdistance a man with no snowshoes. And if his perseverance lasts longer than her strength — for though a moose swings out in a long-stepping, swift trot, it is easily tired — the exhausted moose is a moose at bay; and a moose at bay rears on her hind legs and does defter things with the flattening blow of her fore feet than an exhausted man can do with a gun. The blow of a cleft hoof means something sharply split, wherever that spreading hoof lands. And if the something wriggles on the snow in death-throes, the moose pounds upon it with all four feet till the thing is still. Then she goes on her way with eyes ablaze and every shaggy hair bristling.

The contest was even and the moose won.

Apart from the hazard, there is a barbarism about this straightaway chase, which repels the trapper. It usually succeeds by bogging the moose in crusted snow, or a water hole — and then, Indian fashion, a slaughter; and no trapper kills for the sake of killing, for the simple practical reason that his own life depends on the preservation of game.

A slight snowfall and the wind in his face are ideal conditions for a still hunt. One conceals him. The other carries the man-smell from the game.

Which way does the newly discovered footprint run? More flakes are in one hole than the other. He follows the trail till he has an idea of the direction the moose is taking; for the moose runs straightaway, not circling and doubling back on cold tracks like the deer, but marching direct to the objective point, where it turns, circles slightly — a loop at the end of a line — and lies down a little off the trail. When the pursuer, following the cold scent, runs past, the moose gets wind and is off in the opposite direction like a vanishing streak.

Having ascertained the lie of the land, the trapper leaves the

line of direct trail and follows in a circling detour. Here, he finds the print fresher, not an hour old. The moose had stopped to browse and the markings are moist on a twig. The trapper leaves the trail, advancing always by a detour to leeward. He is sure, now, that it is a spinster. If it had been any other, the moose would not have been alone. The rest would be tracking into the leader's steps; and by the fresh trail he knows for a certainty there is only one. But his very nearness increases the risk. The wind may shift. The snowfall is thinning. This time, when he comes back to the trail, it is fresher still. The hunter now gets his rifle ready. He dare not put his foot down without testing the snow, lest a twig snap. He parts a way through the brush with his hand and replaces every branch. And when next he comes back to the line of the moose's travel, there is no trail. This is what he expected. He takes off his coat; his leggings, if they are loose enough to rub with a leathery swish; his muskrat fur cap, if it has any conspicuous color; his boots, if they are noisy and given to crunching. If only he aim true, he will have moccasins soon enough. Leaving all impedimenta, he follows back on his own steps to the place where he last saw the trail. Perhaps the saucy jay cries with a shrill, scolding shriek that sends cold shivers down the trapper's spine. He wishes he could get his hands on its wretched little neck; and turning himself to a statue, he stands stone-still till the troublesome bird settles down. Then he goes on.

Here is the moose trail!

He dare not follow direct. That would lead past her hiding-place and she would bolt. He resorts to artifice; but, for that matter, so has the moose resorted to artifice. The trapper, too, circles forward, cutting the moose's magic guard with transverse zigzags. But he no longer walks. He crouches, or creeps, or glides noiselessly from shelter to shelter, very much the way a cat advances on an unwary mouse. He sinks to his knees and feels forward for snow-pads every pace. Then he is on all-fours, still circling. His detour has narrowed and narrowed till he knows she must be in

that aspen thicket. The brush is sparser. She has chosen her resting-ground wisely. The man falls forward on his face, closing in, closing in, wiggling and watching till — he makes a horrible discovery. That jay is perched on the topmost bough of the grove; and the man has caught a glimpse of something buff-colored behind the aspens. It may be a moose, or only a log. The untried hunter would fire. Not so the trapper. Haphazard aim means fighting a wounded moose, or letting the creature drag its agony off to inaccessible haunts. The man worms his way round the thicket, sighting the game with the noiseless circling of a hawk before the drop. An ear blinks. But at that instant the jay perks his head to one side with a curious look at this strange object on the ground. In another second it will be off with a call and the moose up.

His rifle is aimed!

A blinding swish of aspen leaves and snow and smoke! The jay is off with a noisy whistle. And the trapper has leather for moccasins, and heavy filling for his snow-shoes, and meat for his larder.

But he must still get the fine filling for heel and toe; and this comes from caribou or deer. The deer, he will still hunt as he has still hunted the moose, with this difference: that the deer runs in circles, jumping back in his own tracks, leaving the hunter to follow a cold scent, while it, by a sheer bound — five — eight — twenty feet off at a new angle, makes for the hiding of dense woods. No one but a barbarian would attempt to run down a caribou; for it can only be done by the shameless trick of snaring in crusted snow, or intercepting while swimming, and then — butchery.

The caribou doesn't run. It doesn't bound. It floats away into space.

One moment a sandy-colored form, with black nose, black feet, and a glory of white statuary above its head, is seen against the far reaches of snow. The next, the form has shrunk — and



Very Fine Gray Squirrel.



Courtesy Hudson Bay Company.

Polar Ermine with His Victim—Note Beady Black Eyes and Black Tip to Tail.

shrunk — and shrunk, antlers laid back against its neck, till there is a vanishing speck on the horizon. The caribou has not been standing at all. It has skimmed out of sight; and if there is any clear ice across the marshes, it literally glides beyond vision from very speed. But, provided no man-smell crosses its course, the caribou is vulnerable in its habits. Morning and evening, it comes back to the same watering-place; and it returns to the same bed for the night. If the trapper can conceal himself without crossing its trail he easily obtains the fine filling for his snow-shoes.

Moccasins must now be made.

The trapper shears off the coarse hair with a sharp knife. The hide is soaked; and a blunter blade tears away the remaining hairs till the skin is white and clean. The flesh side is similarly cleaned and the skin rubbed with all the soap and grease it will absorb. A process of beating follows till the hide is limber. Carelessness at this stage makes buckskin soak up water like a sponge and dry to a shapeless board. The skin must be stretched and pulled till it will stretch no more. Frost helps the tanning, drying all moisture out; and the skin becomes as soft as down, without a crease. The smoke of punk from a rotten tree gives the dark yellow color to the hide and prevents hardening. The skin is now ready for the needle; and all odd bits are hoarded away.

Equipped with moccasins and snow-shoes, the trapper is now the winged messenger of the tragic fates to the forest world.

CHAPTER III

THE INDIAN TRAPPER

It is dawn when the Indian trapper leaves his lodge.

In midwinter of the Far North, dawn comes late. Stars, which shine with a hard, clear, crystal radiance only seen in Northern skies, pale in the gray morning gloom; and the sun comes over the horizon dim through mists of frost-smoke. In an hour the frost-mist, lying thick to the touch like clouds of steam, will have cleared; and there will be nothing from sky-line to sky-line but blinding sunlight and snow-glare.

The Indian trapper must be far afield before mid-day. Then the sun casts no man-shadow to scare game from his snares. Black is the flag of betrayal in Northern midwinter. It is by the big liquid eye, glistening on the snow like a black marble, that the trapper detects the white hare; and a jet tail-tip streaking over the white wastes in dots and dashes tells him the little ermine, whose coat must line some emperor's coronation robe, is alternately scudding over the drifts and diving below the snow with the forward wriggling of a snake under cover. But the moving man-shadow is bigger and plainer on the snow than the hare's eye or the ermine's jet tip; so the Indian trapper sets out in the gray darkness of morning and must reach his hunting-grounds before high noon.

With long snow-shoes, that carry him over the drifts in swift, coasting strides, he swings out in that easy, ambling, Indian trot, which gives never a jar to the runner, nor rests long enough for the snows to crunch beneath his tread.

The rifle, which he got in trade from the fur post, is over his shoulder, or swinging lightly in one hand. A hunter's knife and short-handled woodman's axe hang through the beaded scarf, belting in his loose, caribou capote. Powder-horn and heavy muskrat gauntlets are attached to the cord about his neck; so without losing either he can fight bare-handed, free and in motion, at a moment's notice. And somewhere, in side pockets or hanging down his back, is his *skipertogan* — a skin bag with amulet against evil, matches, touchwood, and a scrap of pemmican. As he grows hot, he throws back his hood, running bareheaded and loose about the chest.

Each breath clouds to frost against his face till hair and brows and lashes are fringed with frozen moisture. The white man would hugger his face up with scarf and collar the more for this; but the Indian knows better. Suddenly chilled breath would soak scarf and collar wet to his skin; and his face would be frozen before he could go five paces. But with dry skin and quickened blood, he can defy the keenest cold; so he loosens his coat and runs the faster.

As the light grows, dim forms shape themselves in the gray haze. Pine groves emerge from the dark, wreathed and festooned in snow. Cones and domes and cornices of snow heap the underbrush and spreading larch boughs. Evergreens are edged with white. Naked trees stand like limned statuary with an antlered crest etched against the white glare. The snow stretches away in a sea of billowed, white drifts that seem to heave and fall to the motions of the runner, mounting and coasting and skimming over the unbroken waste like a bird winging the ocean. And against this endless stretch of drifts billowing away to a boundless circle, of which the man is the centre, his form is dwarfed out of all proportion, till he looks no larger than a bird above the sea.

When the sun rises, strange color effects are caused by the frost haze. Every shrub takes fire; for the ice drops are a prism, and the result is the same as if there had been a star shower or

rainfall of brilliants. Does the Indian trapper see all this? The white man with white man arrogance doubts whether his tawny brother of the wilds sees the beauty about him, because the Indian has no white man's terms of expression. But ask the bronzed trapper the time of day; and he tells you by the length of shadow the sun casts, or the degree of light on the snow. Inquire the season of the year; and he knows by the slant sunlight coming up through the frost smoke of the southern horizon. And get him talking about his Happy Hunting-Grounds; and after he has filled it with the implements and creatures and people of the chase, he will describe it in the metaphor of what he has seen at sunrise and sunset and under the Northern Lights. He does not *see* these things with the gabbling exclamatories of a tourist. He sees them because they sink into his nature and become part of his mental furniture. The most brilliant description that I ever heard of the Hereafter was from an old Cree squaw, toothless, wrinkled like leather, belted at the waist like a sack of wool, with hands of dried parchment, and moccasins some five months too odoriferous. Her version ran that Heaven would be full of the music of running waters and south winds; that there would always be warm gold sunlight like a midsummer afternoon, with purple shadows, where tired women could rest; that the trees would be covered with blossoms, and all the pebbles of the shore like dewdrops.

Pushed from the Atlantic seaboard back over the mountains, from the mountains to the Mississippi, west to the Rockies, north to the Great Lakes, all that was to be seen of nature in America the Indian trapper has seen; though he has not understood.

But now he holds only a fringe of hunting-grounds, in the timber lands of the Great Lakes, in the cañons of the Rockies, and across that Northern land which converges to Hudson Bay, reaching west to Athabasca, east to Labrador. It is in the basin of Hudson Bay regions that the Indian trapper will find his last hunting-grounds. Here climate excludes the white man, and game is plentiful. Here Indian trappers were snaring before

Columbus opened the doors of the New World to the hordes of the Old; and here Indian trappers will hunt as long as the race lasts. When there is no more game, the Indian's doom is sealed; but that day is never for the Hudson Bay region.

The Indian trapper has set few large traps. It is midwinter; and by December there is a curious lull in the hunting. All the streams are frozen like rock; but the otter and pekan and mink and marten have not yet begun to forage at random across open field. Some foolish fish always dilly-dally upstream till the ice shuts them in. Then a strange thing is seen — a kettle of living fish; fish gasping and panting in ice-hemmed water that is gradually lessening as each day's frost freezes another layer to the ice walls of their prison. The banks of such a pond hole are haunted by the otter and his fisher friends. By-and-bye, when the pond is exhausted, these lazy fishers must leave their safe bank and forage across country. Meanwhile, they are quiet.

The bear, too, is still. After much wandering and fastidious choosing — for in trapper vernacular the bear takes a long time to please himself — bruin found an upturned stump. Into the hollow below he clawed grasses. Then he curled up with his nose on his toes and went to sleep under a snow blanket of gathering depth. Deer, moose, and caribou, too, have gone off to their feeding-grounds. Unless they are scattered by a wolf-pack or a hunter's gun, they will not be likely to move till this ground is eaten over. Nor are many beaver seen now. They have long since snuggled into their warm houses, where they will stay till their winter store is all used; and their houses are now hidden under great depths of deepening snow. But the fox and the hare and the ermine are at run; and as long as they are astir, so are their rampant enemies, the lynx and the wolverine and the wolf-pack, all ravenous from the scarcity of other game and greedy as spring crows.

That thought gives wings to the Indian trapper's heels. The

pelt of a coyote — or prairie wolf — would scarcely be worth the taking. Even the big, gray timber-wolf would hardly be worth the cost of the shot, except for service as a tepee mat. The white Arctic wolf would bring better price. The enormous black or brown arctic wolf would be more valuable; but the value would not repay the risk of the hunt. But all these worthless, ravening rascals are watching the traps as keenly as the trapper does; and would eat up a silver fox, that would be the fortune of any hunter.

The Indian comes to the brush where he has set his rabbit snares across a runway. His dog sniffs the ground, whining. The crust of the snow is broken by a heavy tread. The twigs are all trampled and rabbit fur is fluffed about. The game has been rifled away. The Indian notices several things. The rabbit has been devoured on the spot. That is unlike the wolverine. He would have carried snare, rabbit and all off for a guzzle in his own lair. The footprints have the appearance of having been brushed over; so the thief had a bushy tail. It is not the lynx. There is no trail away from the snare. The marauder has come with a long leap and gone with a long leap. The Indian and his dog make a circuit of the snare till they come on the trail of the intruder; and its size tells the Indian whether his enemy be fox or wolf.

He sets no more snares across that runway, for the rabbits have had their alarm. Going through the brush he finds a fresh runway and sets a new snare.

Then his snow-shoes are winging him over the drifts to the next trap. It is a deadfall. Nothing is in it. The bait is untouched and the trap left undisturbed. A wolverine would have torn the thing to atoms from very wickedness, chewed the bait in two, and spat it out lest there should be poison. The fox would have gone in and had his back broken by the front log. And there is the same brush work over the trampled snow, as if the visitor had tried to sweep out his own trail; and the same long leap away, clearing obstruction of log and drift, to throw a pursuer off the

scent. This time the Indian makes two or three circuits; but the snow is so crusted it is impossible to tell whether the scratchings lead out to the open or back to the border of snow-drifted woods. If the animal had followed the line of the traps by running just inside the brush, the Indian would know. But the midwinter day is short, and he has no time to explore the border of the thicket.

Perhaps he has a circle of thirty traps. Of that number he hardly expects game in more than a dozen. If six have a prize, he has done well. Each time he stops to examine a trap he must pause to cover all trace of the man-smell, daubing his own tracks with castoreum, or pomatum, or bears' grease; sweeping the snow over every spot touched by his hand; dragging the flesh side of a fresh pelt across his own trail.

Mid-day comes, the time of the short shadow; and the Indian trapper has found not a thing in his traps. He only knows that some daring enemy has dogged the circle of his snares. That means he must kill the marauder, or find new hunting-grounds. If he had doubt about swift vengeance for the loss of a rabbit, he has none when he comes to the next trap. He sees what is too much for words: what entails as great loss to the poor Indian trapper as an exchange crash to the white man. One of his best steel traps lies a little distance from the pole to which it was attached. It has been jerked up with a great wrench and pulled as far as the chain would go. The snow is trampled and stained and covered with gray fur as soft and silvery as chinchilla. In the trap is a little paw, fresh cut, scarcely frozen. He had caught a silver fox, the fortune of which hunters dream, as prospectors of gold, and speculators of stocks, and actors of fame. But the wolves, the great, black wolves of the Far North, with eyes full of a treacherous green fire and teeth like tusks, had torn the fur to scraps and devoured the fox not an hour before the trapper came.

He knows now what his enemy is; for he has come so suddenly on their trail he can count four different footprints, and claw-marks of different length. They have fought about the little fox; and

some of the smaller wolves have lost fur over it. Then, by the blood-marks, he can tell they have got under cover of the shrub growth to the right.

The Indian says none of the words which the white man might say; but that is nothing to his credit; for just now no words are adequate. But he takes prompt resolution. After the fashion of the old Mosaic law, which somehow is written on the very face of the wilderness as one of its necessities, he decides that only life for life will compensate such loss. The danger of hunting the big, brown wolf—he knows too well to attempt it without help. He will bait his small traps with poison; take out his big, steel wolf traps to-morrow; then with a band of young braves follow the wolf-pack's trail during this lull in the hunting season.

But the animal world knows that old trick of drawing a herring scent across the trail of wise intentions; and of all the animal world, none knows it better than the brown Northern wolf. He carries himself with less of a hang-dog air than his brother wolves, with the same pricking forward of sharp, erect ears, the same crouching trot, the same sneaking, watchful green eyes; but his tail, which is bushy enough to brush out every trace of his tracks, has not the skulking droop of the gray wolf's; and in size he is a giant among wolves.

The trapper shoulders his musket again, and keeping to the open, where he can travel fast on the long snow-shoes, sets out for the next trap. The man-shadow grows longer. It is late in the afternoon. Then all the shadows merge into the purple gloom of early evening; but the Indian travels on; for the circuit of traps leads back to his lodge.

The wolf thief may not be far off; so the man takes his musket from the case. He may chance a shot at the enemy. Where there are woods, wolves run under cover, keeping behind a fringe of brush to windward. The wind carries scent of danger from the open, and the brush forms an ambushade. Man tracks, where

man's dog might scent the trail of a wolf, the wolf clears at a long bound. He leaps over open spaces, if he can; and if he can't, crouches low till he has passed the exposure.

The trapper swings forward in long, straight strides, wasting not an inch of ground, deviating neither to right nor left by as much space as a white man takes to turn on his heels. Suddenly the trapper's dog utters a low whine and stops with ears pricked forward towards the brush. At the same moment the Indian, who has been keeping his eyes on the woods, sees a form rise out of the earth among the shadows. He is not surprised; for he knows the way the wolf travels, and the fox trap could not have been robbed more than an hour ago. The man thinks he has come on the thieves going to the next trap. That is what the wolf means him to think. And the man, too, dissembles; for as he looks the form fades into the gloom, and he decides to run on parallel to the brushwood, with his gun ready. Just ahead is a break in the shrubbery. At the clearing he can see how many wolves there are, and as he is heading home there is little danger.

But at the clearing nothing crosses. The dog dashes off to the woods with wild barking, and the trapper scans the long, white stretch leading back between the bushes to a horizon that is already dim in the steel grays of twilight.

Half a mile down this open way, off the homeward route of his traps, a wolfish figure looms black against the snow — and stands! The dog prances round and round as if he would hold the creature for his master's shot; and the Indian calculates — "After all, there is only one."

What a chance to approach it under cover, as it has approached his traps! The stars are already pricking the blue darkness in cold, steel points; and the Northern Lights are swinging through the gloom like mystic censers to an invisible Spirit, the Spirit of the still, white, wide, Northern wastes. It is as clear as day.

One thought of his loss at the fox trap sends the Indian flitting through the underwoods like a hunted partridge. The sharp

barkings of the dog increase in fury, and when the trapper emerges in the open, he finds the wolf has straggled a hundred yards farther. That was the meaning of the dog's alarm. Going back to cover, the hunter again advances. But the wolf keeps moving leisurely, and each time the man sights his game it is still out of range. The man runs faster now, determined to get abreast of the wolf and utterly heedless of the increasing danger, as each step puts greater distance between him and his lodge. He will pass the wolf, come out in front and shoot.

But when he comes to the edge of the woods to get his aim, there is no wolf, and the dog is barking furiously at his own moonlit shadow. The wolf, after the fashion of his kind, has apparently disappeared into the ground, just as he always seems to rise from the earth. The trapper thinks of the "loup-garou," but no wolf-demon of native legend devoured the very real substance of that fox.

The dog stops barking, gives a whine and skulks to his master's feet, while the trapper becomes suddenly aware of low-crouching forms gliding through the underbrush. Eyes look out of the dark in the flash of green lights from a prism. The figures are in hiding, but the moon is shining with a silvery clearness that throws moving wolf shadows on the snow to the trapper's very feet.

Then the man knows that he has been tricked.

The Indian knows the wolf-pack too well to attempt flight from these sleuths of the forest. He knows, too, one thing that wolves of forest and prairie hold in deadly fear — fire. Two or three shots ring into the darkness followed by a yelping howl, which tells him there is one wolf less, and the others will hold off at a safe distance. Contrary to the woodman's traditions of chopping only on a windy day, the Indian whips out his axe and chops with all his might till he has wood enough for a roaring fire. That will keep the rascals away till the pack goes off in full cry, or daylight comes.

Whittling a limber branch from a sapling, the Indian hastily

makes a bow, and shoots arrow after arrow with the tip in flame to high mid-air, hoping to signal the far-off lodges. But the night is too clear. The sky is silver with stars, and moonlight and reflected snow-glare, and the Northern Lights flicker and wane and fade and flame with a brilliancy that dims the tiny blaze of the arrow signal. The smoke rising from his fire in a straight column falls at the height of the trees, for the frost lies on the land heavy, palpable, impenetrable. And for all the frost is thick to the touch, the night is as clear as burnished steel. That is the peculiarity of Northern cold. The air seems to become absolutely compressed with the cold; but that same cold freezes out and precipitates every particle of floating moisture till earth and sky, moon and stars shine with the glistening of polished metal.

A curious crackling, like the rustling of a flag in a gale, comes through the tightening silence. The intelligent half-breed says this is from the Northern Lights. The white man says it is electric activity in compressed air. The Indian says it is a spirit, and he may mutter the words of the braves in death chant:

“If I die, I die valiant,
I go to death fearless.
I die a brave man.
I go to those heroes who died without fear.”

Hours pass. The trapper gives over shooting fire arrows into the air. He heaps his fire and watches, musket in hand. The light of the moon is white like statuary. The snow is pure as statuary. The snow-edged trees are chiselled clear like statuary; and the silence is of stone. Only the snap of the blaze, the crackling of the frosted air, the break of a twig back among the brush, where something has moved, and the little, low, smothered barkings of the dog on guard.

By-and-bye the rustling through the brush ceases; and the dog at last lowers his ears and lies quiet. The trapper throws a

stick into the woods and sends the dog after it. The dog comes back without any barking of alarm. The man knows that the wolves have drawn off. Will he wait out that long Northern night? He has had nothing to eat but the piece of pemmican. The heavy frost drowsiness will come presently; and if he falls asleep the fire will go out. An hour's run will carry him home; but to make speed with the snow-shoes he must run in the open, exposed to all watchers.

When an Indian balances motives, the motive of hunger invariably prevails. Pulling up his hood, belting in the caribou coat and kicking up the dog, the trapper strikes out for the open way leading back to the line of his traps, and the hollow where the lodges have been built for shelter against wind. There is another reason for building lodges in a hollow. Sound of the hunter will not carry to the game; but neither will sound of the game carry to the hunter.

And if the game should turn hunter and the man turn hunted! The trapper speeds down the snowy slope, striding, sliding, coasting, vaulting over hummocks of snow, glissading down the drifts, leaping rather than running. The frosty air acts as a conductor to sound, and the frost films come in stings against the face of the man whose eye, ear, and touch are strained for danger. It is the dog that catches the first breath of peril, uttering a smothered "*woo! woo!*" The trapper tries to persuade himself the alarm was only the far scream of a wolf-hunted lynx; but it comes again, deep and faint, like an echo in a dome. One glance over his shoulder shows him black forms on the snow-crest against the sky.

He has been tricked again, and knows how the fox feels before the dogs in full cry.

The trapper is no longer a man. He is a hunted thing with terror crazing his blood and the sleuth-hounds of the wilds on his trail. Something goes wrong with his snow-shoe. Stooping to right the slip-strings, he sees that the dog's feet have been cut by the snow crust and are bleeding. It is life for life now; the old,

hard, inexorable Mosaic law, that has no new dispensation in the Northern wilderness, and demands that a beast's life shall not sacrifice a man's.

One blow of his gun and the dog is dead.

The far, faint howl has deepened to a loud, exultant bay. The wolf-pack are in full cry. The man has rounded the open alley between the trees and is speeding down the hillside winged with fear. He hears the pack pause where the dog fell. That gives him respite. The moon is behind, and the man-shadow flits before on the snow like an enemy heading him back. The deep bay comes again, hard, metallic, resonant, nearer! He feels the snow-shoe slipping, but dare not pause. A great drift thrusts across his way and the shadow in front runs slower. They are gaining on him. He hardly knows whether the crunch of snow and pantings for breath are his own or his pursuers'. At the crest of the drift he braces himself and goes to the bottom with the swiftness of a sled on a slide.

The slant moonlight throws another shadow on the snow at his heels.

It is the leader of the pack. The man turns, and tosses up his arms — an Indian trick to stop pursuit. Then he fires. The ravening hunter of man that has been ambushing him half the day rolls over with a piercing howl.

The man is off and away.

If he only had the repeater, with which white men and a body-guard of guides hunt down a single quarry, he would be safe enough now. But the old rifle is slow loading, and speed will serve him better than another shot.

Then the snow-shoe noose slips completely over his instep to his ankle, throwing the racquet on edge and clogging him back. Before he can right it they are upon him. There is nothing for it now but to face and fight to the last breath. His hood falls back, and he wheels with the moonlight full in his eyes and the Northern Lights waving their mystic flames high overhead. On

one side, far away, are the tepee peaks of the lodges; on the other, the solemn, shadowy, snow-wreathed trees, like funeral watchers — watchers of how many brave deaths in a desolate, lonely land where no man raises a cross to him who fought well and died without fear!

The wolf-pack attacks in two ways. In front, by burying the red-gummed fangs in the victim's throat; in the rear, by snapping at sinews of the runner's legs — called hamstringing. Who taught them this devilish ingenuity of attack? The same hard master who teaches the Indian to be as merciless as he is brave — hunger!

Catching the muzzle of his gun, he beats back the snapping red mouths with the butt of his weapon; and the foremost beasts roll under.

But the wolves are fighting from zest of the chase now, as much as from hunger. Leaping over their dead fellows, they dodge the coming sweep of the uplifted arm, and crouch to spring. A great brute is reaching for the forward bound; but a mean, small wolf sneaks to the rear of the hunter's fighting shadow. When the man swings his arm and draws back to strike, this miserable cur, that could not have worried the trapper's dog, makes a quick snap at the bend of his knees.

Then the trapper's feet give below him. The wolf has bitten the knee sinews to the bone. The pack leap up, and the man goes down.

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And when the spring thaw came, to carry away the heavy snow that fell over the Northland that night, the Indians travelling to their summer hunting-grounds found the skeleton of a man. Around it were the bones of three dead wolves; and farther up the hill were the bleaching remains of a fourth.¹

¹ A death almost similar to that on the shores of Hudson Bay occurred in the forests of the Boundary, west of Lake Superior, a few years ago. In this case eight wolves were found round the body of the dead trapper, and eight holes were empty in his cartridge-belt — which tells its own story.

CHAPTER IV

BA'TISTE, THE BEAR HUNTER

THE city man, who goes bear-hunting with a bodyguard of armed guides in a field where the hunted have been on the run from the hunter for a century, gets a very tame idea of the natural bear in its natural state. Bears that have had the fear of man inculcated with long-range repeaters lose confidence in the prowess of an aggressive onset against invisible foes. The city man comes back from the wilds with a legend of how harmless bears have become. In fact, he doesn't believe a wild animal ever attacks unless it is attacked. He doubts whether the bear would go on its life-long career of rapine and death, if hunger did not compel it, or if repeated assault and battery from other animals did not teach the poor bear the art of self-defence.

Grizzly old trappers coming down to the frontier towns of the Western States once a year for provisions, or hanging round the forts of the Hudson's Bay Company in Canada for the summer, tell a different tale. Their hunting is done in a field where human presence is still so rare that it is unknown and the bear treats mankind precisely as he treats all other living beings from the moose and the musk-ox to mice and ants — as fair game for his own insatiable maw.

Old hunters may be great spinners of yarns — "liars," the city man calls them — but Montagnais, who squats on his heels round the fur company forts on Peace River, carries ocular evidence in the artificial ridge of a deformed nose that the bear which he slew was a real one with an epicurean relish for that part of Indian

anatomy which the Indian considers to be the most choice bit of a moose.¹ And the Kootenay hunter who was sent through the forests of Idaho to follow up the track of a lost brave brought back proof of an actual bear; for he found a dead man lying across a pile of logs with his skull crushed in like an egg-shell by something that had risen swift and silent from a lair on the other side of the logs and dealt the climbing brave one quick terrible blow. And little blind Ba'tiste, wizened and old, who spent the last twenty years of his life weaving grass mats and carving curious little wooden animals for the children of the chief factor, could convince you that the bears he slew in his young days were very real bears, altogether different from the clumsy bruins that gambol with boys and girls through fairy books.

That is, he could convince you if he would; for he usually sat weaving and weaving at the grasses — weaving bitter thoughts into the woof of his mat — without a word. Round his white helmet, such as British soldiers wear in hot lands, he always hung a heavy thick linen thing like the frill of a sunbonnet, coming over the face as well as the neck — “to keep de sun off,” he would mumble out if you asked him why. More than that of the mysterious frill worn on dark days as well as sunny, he would never vouch unless some town-bred man patronizingly pooh-poohed the dangers of bear-hunting. Then the grass strands would tremble with excitement and the little French hunter's body would quiver and he would begin pouring forth a jumble, half habitant, half Indian, with a mixture of all the oaths from both languages, pointing and pointing at his hidden face and bidding you look what the bear had done to him, but never lifting the thick frill.

It was somewhere between the tributary waters that flow north to the Saskatchewan and the rivers that start near the Sas-

¹ In further confirmation of Montagnais's bear, the chief factor's daughter, who told me the story, was standing in the fort gate when the Indian came running back with a grizzly pelt over his shoulder. When he saw her his hands went up to conceal the price he had paid for the pelt.



Courtesy Gottlieb Company.

Very Fine Bunch of Mink.



Courtesy Hudson Bay Company.

Badger — Badger Is a Soft Fluffy Fur, an Ideal Frame for Any Face, Has Lately Become Very Fashionable.

katchewan to flow south to the Missouri. Ba'tiste and the three trappers who were with him did not know which side of the boundary they were on. By slow travel, stopping one day to trap beaver, pausing on the way to forage for meat, building their canoes where they needed them and abandoning the boats when they made a long overland *portage*, they were three weeks north of the American fur post on the banks of the Missouri. The hunters were travelling light-handed. That is, they were carrying only a little salt and tea and tobacco. For the rest, they were depending on their muskets. Game had not been plentiful.

Between the prairie and "the Mountains of the Setting Sun" — as the Indians call the Rockies — a long line of tortuous, snaky red crawled sinuously over the crests of the foothills; and all game — bird and beast — will shun a prairie fire. There was no wind. It was the dead hazy calm of Indian summer in the late autumn with the sun swimming in the purplish smoke like a blood-red shield all day and the serpent line of flame flickering and darting little tongues of vermilion against the deep blue horizon all night, days filled with the crisp smell of withered grasses, nights as clear and cold as the echo of a bell. On a windless plain there is no danger from a prairie fire. One may travel for weeks without nearing or distancing the waving tide of fire against a far sky; and the four trappers, running short of rations, decided to try to flank the fire coming around far enough ahead to intercept the game that must be moving away from the fire line.

Nearly all hunters, through some dexterity of natural endowment, unconsciously become specialists. One man sees beaver signs where another sees only deer. For Ba'tiste, the page of nature spelled *B-E-A-R*! Fifteen bear in a winter is a wonderfully good season's work for any trapper. Ba'tiste's record for one lucky winter was fifty-four. After that he was known as the bear hunter. Such a reputation affects keen hunters differently. The Indian grows cautious almost to cowardice. Ba'tiste grew rash. He would follow a wounded grizzly to cover. He would afterward

laugh at the episode as a joke if the wounded brute had treed him. "For sure, good t'ing dat was not de prairie dat tam," he would say, flinging down the pelt of his foe. The other trappers with Indian blood in their veins might laugh, but they shook their heads when his back was turned.

Flanking the fire by some of the great gullies that cut the foothills like trenches, the hunters began to find the signs they had been seeking. For Ba'tiste, the many different signs had but one meaning. Where some summer rain pool had dried almost to a soft mud hole, the other trappers saw little cleft foot-marks that meant deer, and prints like a baby's fingers that spelled out the visit of some member of the weasel family, and broad clay-hoof impressions that had spread under the weight as some giant moose had gone shambling over the quaking mud bottom. But Ba'tiste looked only at a long shuffling foot-mark the length of a man's fore-arm with paddle ball-like pressures as of monster toes. The French hunter would at once examine which way that great foot had pointed. Were there other impressions dimmer on the dry mud? Did the crushed spear-grass tell any tales of what had passed that mud hole? If it did, Ba'tiste would be seen wandering apparently aimlessly out on the prairie, carrying his uncased rifle carefully that the sunlight should not glint from the barrel, zig-zagging up a foothill where perhaps wild plums or shrub berries hung rotting with frost ripeness. Ba'tiste did not stand full height at the top of the hill. He dropped face down, took off his hat or scarlet "safety" handkerchief, and peered warily over the crest of the hill. If he went on over into the next valley, the other men would say they "guessed he smelt bear." If he came back, they knew he had been on a cold scent that had faded indistinguishably as the grasses thinned.

Southern slopes of prairie and foothill are often matted tangles of a raspberry patch. Here Ba'tiste read many things — stories of many bears, of families, of cubs, of old cross fellows wandering alone. Great slabs of stone had been clawed up by mighty hands.

Worms and snails and all the damp clammy things that cling to the cold dark between stone and earth had been gobbled up by some greedy forager. In the trenched ravines crossed by the trappers lay many a hidden forest of cottonwood or poplar or willow. Here was refuge, indeed, for the wandering creatures of the treeless prairie that rolled away from the tops of the cliffs.

Many secrets could be read from the clustered woods of the ravines. The other hunters might look for the fresh nibbled alder bush where a busy beaver had been laying up store for winter, or detect the blink of a russet ear among the seared foliage betraying a deer, or wonder what flesh-eater had caught the poor jack rabbit just outside his shelter of thorny brush.

The hawk soaring and dropping — liting and falling and lifting again — might mean that a little mink was “playing dead” to induce the bird to swoop down so that the vampire beast could suck the hawk’s blood, or that the hawk was watching for an unguarded moment to plunge down with his talons in a poor “fool-hen’s” feathers.

These things might interest the others. They did not interest Ba’tiste. Ba’tiste’s eyes were for lairs of grass crushed so recently that the spear leaves were even now rising; for holes in the black mould where great ripping claws had been tearing up roots; for hollow logs and rotted stumps where a black bear might have crawled to take his afternoon siesta; for punky trees which a grizzly might have torn open to gobble ants’ eggs; for scratchings down the bole of poplar or cottonwood where some languid bear had been sharpening his claws in midsummer as a cat will scratch chair-legs; for great pits deep in the clay banks, where some silly badger or gopher ran down to the depths of his burrow in sheer terror only to have old bruin come ripping and tearing to the innermost recesses, with scattered fur left that told what had happened.

Some soft oozy moss-padded lair, deep in the marsh with the reeds of the brittle cat-tails lifting as if a sleeper had just risen, sets Ba’tiste’s pulse hopping — jumping — marking time in thrills

like the lithe bounds of a pouncing mountain-cat. With tread soft as the velvet paw of a panther, he steals through the cane-brake parting the reeds before each pace, brushing aside softly — silently what might crush! — snap! — sound ever so slight an alarm to the little pricked ears of a shabby head tossing from side to side — jerk — jerk — from right to left — from left to right — always on the listen! — on the listen! — for prey! — for prey!

“Oh, for sure, that Ba’tiste, he was but a fool-hunter,” as his comrades afterward said (it is always so very plain afterward); “that Ba’tiste, he was a fool! What man else go step — step — into the marsh after a bear!”

But the truth was that Ba’tiste, the cunning rascal, always succeeded in coming out of the marsh, out of the bush, out of the windfall, sound as a top, safe and unscratched, with a bear skin over his shoulder, the head swinging pendant to show what sort of fellow he had mastered.

“Dat wan! — ah! — diable! — he has long sharp nose — he was thin — thin as a barrel all gone but de hoops — ah! — voilà! — he was wan ugly garçon, was dat bear!”

Where the hunters found tufts of fur on the sage brush, bits of skin on the spined cactus, the others might vow coyotes had worried a badger. Ba’tiste would have it that the badger had been slain by a bear. The cached carcass of fawn or doe, of course, meant bear; for the bear is an epicure that would have meat gamy. To that the others would agree.

And so the shortening autumn days with the shimmering heat of a crisp noon and the noiseless chill of starry twilights found the trappers canoeing leisurely upstream from the northern tributaries of the Missouri nearing the long overland trail that led to the hunting-fields in Canada.

One evening they came to a place bounded by high cliff banks with the flats heavily wooded by poplar and willow. Ba’tiste had found signs that were hot — oh! so hot! The mould of an up-

rooted gopher hole was so fresh that it had not yet dried. This was not a region of timber-wolves. What had dug that hole? Not the small, skulking coyote — the vagrant of prairie life! Oh! — no! — the coyote like other vagrants earns his living without work, by skulking in the wake of the business-like badger; and when the badger goes down in the gopher hole, Master Coyote stands near by and gobbles up all the stray gophers that bolt to escape the invading badger.¹ What had dug the hole? Ba'tiste thinks that he knows.

That was on open prairie. Just below the cliff is another kind of hole — a roundish pit dug between moss-covered logs and earth wall, a pit with grass¹ clawed down into it, snug and hidden and sheltered as a bird's nest. If the pit is what Ba'tiste thinks, somewhere on the banks of the stream should be a watering-place. He proposes that they beach the canoes and camp here. Twilight is not a good time to still hunt an unseen bear. Twilight is the time when the bear himself goes still hunting. Ba'tiste will go out in the early morning. Meantime if he stumbles on what looks like a trail to the watering-place, he will set a trap.

Camp is not for the regular trapper what it is for the amateur hunter — a time of rest and waiting while others skin the game and prepare supper.

One hunter whittles the willow sticks that are to make the camp fire. Another gathers moss or boughs for a bed. If fish can be got, some one has out a line. The kettle hisses from the cross-bar between notched sticks above the fire, and the meat sizzling at the end of a forked twig sends up a flavor that whets every appetite. Over the upturned canoes bent a couple of men gumming afresh all the splits and seams against to-morrow's voyage. Then with a flip-flop that tells of the other side of the flap-jacks being browned, the cook yodels in crescendo that "Sup — per! — 's — read — ee!"

¹ This phase of prairie life must not be set down to writer's license. It is something that every rider of the plains can see any time he has patience to rein up and sit like a statue within field-glass distance of the gopher burrows about nightfall when the badgers are running.

Supper over, a trap or two may be set in likely places. The men may take a plunge; for in spite of their tawny skins, these earth-colored fellows have closer acquaintance with water than their appearance would indicate. The man-smell is as acute to the beast's nose as the rank fur-animal-smell is to the man's nose; and the first thing that an Indian who has had a long run of ill-luck does is to get a native "sweating-bath" and make himself clean.

On the ripple of the flowing river are the red bars of the camp fire. Among the willows, perhaps, the bole of some birch stands out white and spectral. Though there is no wind, the poplars shiver with a fall of wan, faded leaves like snow-flakes on the grave of summer. Red bills and whiskey-jacks and lonely phoebe-birds come fluttering and pecking at the crumbs. Out from the gray thicket bounds a cottontail to jerk up on his hind legs with surprise at the camp fire. A blink of his long ear, and he has bounded back to tell the news to his hare family. Overhead, with shrill clangor, single file and in long wavering V lines, wing geese migrating southward for the season. The children's hour, has a great poet called a certain time of day? Then this is the hour of the wilderness hunter, the hour when "the Mountains of the Setting Sun" are flooded in fiery lights from zone to zenith with the snowy heights overtopping the far rolling prairie like clouds of opal at poise in mid-heaven, the hour when the camp fire lies on the russet autumn-tinged earth like a red jewel, and the far line of the prairie fire billows against the darkening east in a tide of vermilion flame.

Unless it is raining, the *voyageurs* do not erect their tent; for they will sleep in the open, feet to the fire, or under the canoes, close to the great earth, into whose very fibre their beings seem to be rooted. And now is the time when the hunters spin their yarns and exchange notes of all they have seen in the long silent day. There was the prairie chicken with a late brood of half-grown clumsy clucking chicks amply able to take care of themselves, but still clinging to the old mother's care. When the hunter came

suddenly on them, over the old hen went, flopping broken-winged to decoy the trapper till her children could run for shelter — when — lo! — of a sudden, the broken wing is mended and away she darts on both wings before he has uncased his gun! There are the stories of bear hunters like Ba'tiste sitting on the other side of the fire there, who have been caught in their own bear traps and held till they died of starvation and their bones bleached in the rusted steel.

That story has such small relish for Ba'tiste that he hitches farther away from the others and lies back flat on the ground close to the willow under-tangle with his head on his hand.

"For sure," says Ba'tiste contemptuously, "nobody doesn't need no tree to climb here! *Sacré!* — cry wolf! — wolf! — and for sure! — diable! — *de beeg loup-garou* will eat you yet!"

Down somewhere from those stars overhead drops a call silvery as a flute, clear as a piccolo — some night bird lilting like a mote on the far oceans of air. The trappers look up with a movement that in other men would be a nervous start; for any shrill cry pierces the silence of the prairie in almost a stab. Then the men go on with their yarn telling of how the Blackfeet murdered some traders on this very ground so long ago, till the gloom gathering over willow thicket and encircling cliffs seems peopled with those marauding warriors. One man rises, saying that he is "goin' to turn in" and is taking a step through the dark to his canoe when there is a dull pouncing thud. For an instant the trappers thought that their comrade had stumbled over his boat. But a heavy groan — a low guttural cry — a shout of "Help — help — help Ba'tiste!" and the man who had risen plunged into the crashing cane-brake, calling out incoherently for them to "help — help Ba'tiste!"

In the confusion of cries and darkness, it was impossible for the other two trappers to know what had happened. Their first thought was of the Indians whose crimes they had been telling. Their second was for their rifles — and they had both sprung over the fire where they saw the third man striking — striking — striking wildly at something in the dark. A low worrying growl — and

they descried the Frenchman rolling over and over, clutched by or clutching a huge furry form — hitting — plunging with his knife — struggling — screaming with agony.

“It’s Ba’tiste! It’s a bear!” shouted the third man, who was attempting to drive the brute off by raining blows on its head.

Man and bear were an indistinguishable struggling mass. Should they shoot in the half-dark? Then the Frenchman uttered the scream of one in death-throes: “Shoot! — shoot! — shoot quick! She’s striking my face! — she’s striking my face ——”

And before the words had died, sharp flashes of light cleft the dark — the great beast rolled over with a coughing growl, and the trappers raised their comrade from the ground.

The bear had had him on his back between her teeth by the thick chest piece of his double-breasted buckskin. Except for his face, he seemed uninjured; but down that face the great brute had drawn the claws of her fore paw.

Ba’tiste raised his hands to his face.

“Mon Dieu!” he asked thickly, fumbling with both hands, “what is done to my eyes? Is the fire out? I cannot see!”

Then the man who had fought like a demon armed with only a hunting-knife fainted because of what his hands felt.

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Traitors there are among trappers as among all other classes, men like those who deserted Glass on the Missouri, and Scott on the Platte, and how many others whose treachery will never be known.

But Ba’tiste’s comrades stayed with him on the banks of the river that flows into the Missouri. One cared for the blind man. The other two foraged for game. When the wounded hunter could be moved, they put him in a canoe and hurried downstream to the fur post before the freezing of the rivers. At the fur post, the doctor did what he could; but a doctor cannot restore what has been torn away. The next spring, Ba’tiste was put on a pack horse

and sent to his relatives at the Canadian fur post. Here his sisters made him the curtain to hang round his helmet and set him to weaving grass mats that the days might not drag so wearily.

Ask Ba'tiste whether he agrees with the amateur hunter that bears never attack unless they are attacked, that they would never become ravening creatures of prey unless the assaults of other creatures taught them ferocity, ask Ba'tiste this and something resembling the snarl of a baited beast breaks from the lipless face under the veil:

"S—s—sz!—" with a quiver of inexpressible rage. "The bear—it is an animal!—the bear!—it is a beast!—toujours!—the bear!—it is a beast!—always—always!" And his hands clinch.

Then he falls to carving of the little wooden animals and weaving of sad, sad, bitter thoughts into the warp of the Indian mat.

Are such onslaughts common among bears, or are they the mad freaks of the bear's nature? President Roosevelt tells of two soldiers bitten to death in the South-west; and M. l'Abbé Dugast, of St. Boniface, Manitoba, incidentally relates an experience almost similar to that of Ba'tiste which occurred in the North-west. Lest Ba'tiste's case seem overdrawn, I quote the Abbé's words:

"At a little distance Madame Lajimoniere and the other women were preparing the tents for the night, when all at once Bouvier gave a cry of distress and called to his companions to help him. At the first shout, each hunter seized his gun and prepared to defend himself against the attack of an enemy; they hurried to the other side of the ditch to see what was the matter with Bouvier, and what he was struggling with. They had no idea that a wild animal would come near the fire to attack a man even under cover of night; for fire usually has the effect of frightening wild beasts. However, almost before the four hunters knew what had happened, they saw their unfortunate companion dragged into the woods by a bear followed by her two cubs. She held Bouvier in her claws and struck him savagely in the face to stun him. As soon as she

saw the four men in pursuit, she redoubled her fury against her prey, tearing his face with her claws. M. Lajimoniere, who was an intrepid hunter, baited her with the butt end of his gun to make her let go her hold, as he dared not shoot for fear of killing the man while trying to save him, but Bouvier, who felt himself being choked, cried with all his strength: 'Shoot; I would rather be shot than eaten alive!' M. Lajimoniere pulled the trigger as close to the bear as possible, wounding her mortally. She let go Bouvier and before her strength was exhausted made a wild attack upon M. Lajimoniere, who expected this and as his gun had only one barrel loaded, he ran towards the canoe, where he had a second gun fully charged. He had hardly seized it before the bear reached the shore and tried to climb into the canoe, but fearing no longer to wound his friend, M. Lajimoniere aimed full at her breast and this time she was killed instantly. As soon as the bear was no longer to be feared, Madame Lajimoniere, who had been trembling with fear during the tumult, went to raise the unfortunate Bouvier, who was covered with wounds and nearly dead. The bear had torn the skin from his face with her nails from the roots of his hair to the lower part of his chin. His eyes and nose were gone — in fact his features were indiscernible — but he was not mortally injured. His wounds were dressed as well as the circumstances would permit, and thus crippled he was carried to the Fort of the Prairies, Madame Lajimoniere taking care of him all through the journey. In time his wounds were successfully healed, but he was blind and infirm to the end of his life. He dwelt at the Fort of the Prairies for many years, but when the first missionaries reached Red River in 1818, he persuaded his friends to send him to St. Boniface to meet the priests and ended his days in M. Provencher's house. He employed his time during the last years of his life in making crosses and crucifixes, blind as he was, but he never made any *chefs d'œuvre*."

Such is bear-hunting and such is the nature of the bear. And these things are not of the past. Wherever long-range repeaters

have not put the fear of man in the animal heart, the bear is the aggressor. Even as I write comes word from a little frontier fur post which I visited in 1901, of a seven-year-old boy being waylaid and devoured by a grizzly only four miles back from a transcontinental railway. This is the second death from the unprovoked attacks of bears within a month in that country — and that month, the month of August, 1902, when sentimental ladies and gentlemen many miles away from danger were sagely discussing whether the bear is naturally ferocious or not — whether, in a word, it is altogether *humane to hunt bears*.¹

¹ Since writing the above, I have just come back from eighteen weeks in the North Country. In one camp, our cook-tent was cleaned out six nights out of seven by a bear. On a fourteen-mile tramp down a mountain, on the peak of which we had slept for the night, we met a black bear. I am not sure which of us retired the more quickly; for we had no firearms; but the bear lay in the underbrush till we passed. That night he came down and refused to be driven from the cook-tent. Firearms were forbidden in that National Park; so we did the retiring — all of which does not seem to prove that bear life is becoming rapidly extinct, certainly not in Jasper Park, where the intruder boldly posed for a flashlight photograph. It gave me great satisfaction later to buy two black bear pelts.

CHAPTER V

JOHN COLTER — FREE TRAPPER

LONG before sunrise hunters were astir in the mountains.

The Crows were robbers, the Blackfeet murderers; and scouts of both tribes haunted every mountain defile where a white hunter might pass with provisions and peltries which these rascals could plunder.

The trappers circumvented their foes by setting the traps after nightfall and lifting the game before daybreak.

Night in the mountains was full of a mystery that the imagination of the Indians peopled with terrors enough to frighten them away. The sudden stilling of mountain torrent and noisy leaping cataract at sundown when the thaw of the upper snows ceased, the smothered roar of rivers under ice, the rush of whirlpools through the blackness of some far cañon, the crashing of rocks thrown down by unknown forces, the shivering echo that multiplied itself a thousandfold and ran "rocketing" from peak to peak startling the silences — these things filled the Indian with superstitious fears.

The gnomes, called in trapper's vernacular "hoodoos" — great pillars of sandstone higher than a house, left standing in valleys by prehistoric floods — were to the Crows and Blackfeet petrified giants that only awakened at night to hurl down rocks on intruding mortals. And often the quiver of a shadow in the night wind gave reality to the Indian's fears. The purr of streams over rocky bed was whispering, the queer quaking echoes of falling rocks were giants at war, and the mists rising from swaying waterfalls, spirit-forms portending death.

Morning came more ghostly among the peaks.

Thick white clouds banked the mountains from peak to base, blotting out every scar and tor as a sponge might wash a slate. Valleys lay blanketed in smoking mist. As the sun came gradually up to the horizon far away east behind the mountains, scarp and pinnacle butted through the fog, stood out bodily from the mist, seemed to move like living giants from the cloud banks. "How could they do that if they were not alive?" asked the Indian. Elsewhere, shadows came from sun, moon, starlight, or camp fire. But in these valleys were pencilled shadows of peaks upside down, shadows all the colors of the rainbow pointing to the bottom of the green Alpine lakes, hours and hours before any sun had risen to cause the shadows. All this meant "bad medicine" to the Indian, or, in white man's language, mystery.

Unless they were foraging in large bands, Crows and Blackfeet shunned the mountains after nightfall. That gave the white man a chance to trap in safety.

Early one morning two white men slipped out of their sequestered cabin built in hiding of the hills at the headwaters of the Missouri. Under covert of brushwood lay a long odd-shaped canoe, sharp enough at the prow to cleave the narrowest waters between rocks, so sharp that French *voyageurs* gave this queer craft the name "*canot à bec d'esturgeon*" — that is, a canoe like the nose of a sturgeon. This American adaptation of the Frenchman's craft was not of birch-bark. That would be too frail to essay the rock-ribbed cañons of the mountain streams. It was usually a common dugout, hollowed from a cottonwood or other light timber, with such an angular narrow prow that it could take the sheerest dip and mount the steepest wave-crest where a rounder boat would fill and swamp. Dragging this from cover, the two white men pushed out on the Jefferson Fork, dipping now on this side, now on that, using the reversible double-bladed paddles which only an amphibious boatman can manage. The two men shot out in midstream, where the mists would hide them from each shore; a moment later the white fog had enfolded them, and there was no

trace of human presence but the trail of dimpling ripples in the wake of the canoe.

No talking, no whistling, not a sound to betray them. And there were good reasons why these men did not wish their presence known. One was Potts, the other John Colter. Both had been with the Lewis and Clark exploring party of 1804-'05, when a Blackfoot brave had been slain for horse-thieving by the first white men to cross the Upper Missouri. Besides, the year before coming to the Jefferson, Colter had been with the Missouri Company's fur brigade under Manuel Lisa, and had gone to the Crows as an emissary from the fur company. While with the Crows, a battle had taken place against the Blackfeet, in which they suffered heavy loss owing to Colter's prowess. That made the Blackfeet sworn enemies to Colter.

Turning off the Jefferson, the trappers headed their canoe up a side stream, probably one of those marshy reaches where beavers have formed a swamp by damming up the current of a sluggish stream. Such quiet waters are favorite resorts for beaver and mink and marten and pekan. Setting their traps only after night-fall, the two men could not possibly have put out more than forty or fifty. Thirty traps are a heavy day's work for one man. Six prizes out of thirty are considered a wonderful run of luck; but the empty traps must be examined as carefully as the successful ones. Many that have been mauled, "scented" by a beaver scout and left, must be replaced. Others must have fresh bait; others, again, carried to better grounds where there are more game signs.

Either this was a very lucky morning and the men were detained taking fresh pelts, or it was a very unlucky morning and the men had decided to trap farther upstream; for when the mists began to rise, the hunters were still in their canoe. Leaving the beaver meadow, they continued paddling upstream away from the Jefferson. A more hidden watercourse they could hardly have found. The swampy beaver-runs narrowed, the shores rose higher and higher into rampart walls, and the dark-shadowed waters came

leaping down in the lumpy, uneven runnels of a small cañon. You can always tell whether the waters of a cañon are compressed or not, whether they come from broad, swampy meadows or clear snow streams smaller than the cañon. The marsh waters roll down swift and black and turbid, raging against the crowding walls; the snow streams leap clear and foaming as champagne, and are in too great a hurry to stop and quarrel with the rocks. It is altogether likely these men recognized swampy water, and were ascending the cañon in search of a fresh beaver-marsh; or they would not have continued paddling six miles above the Jefferson with daylight growing plainer at every mile. First the mist rose like a smoky exhalation from the river; then it flaunted across the rampart walls in banners; then the far mountain peaks took form against the sky, islands in a sea of fog; then the cloud banks were floating in mid-heaven blindingly white from a sun that painted each cañon wall in the depths of the water.

How much farther would the cañon lead? Should they go higher up or not? Was it wooded or clear plain above the walls? The man paused. What was that noise?

"Like buffalo," said Potts.

"Might be Blackfeet," answered Colter.

No. What would Blackfeet be doing, riding at a pace to make such thunder so close to a cañon? It was only a buffalo herd stampeding on the annual southern run. Again Colter urged that the noise *might* be from Indians. It would be safer for them to retreat at once. At which Potts wanted to know if Colter were afraid, using a stronger word — "coward."

Afraid? Colter afraid? Colter who had remained behind Lewis and Clark's men to trap alone in the wilds for nearly two years, who had left Manuel Lisa's brigade to go alone among the thieving Crows, whose leadership had helped the Crows to defeat the Blackfeet?

Anyway, it would now be as dangerous to go back as forward. They plainly couldn't land here. Let them go ahead where the

walls seemed to slope down to shore. Two or three strokes sent the canoe round an elbow of rock into the narrow course of a creek. Instantly out sprang five or six hundred Blackfeet warriors with weapons levelled, guarding both sides of the stream.

An Indian scout had discovered the trail of the white men and sent the whole band scouring ahead to intercept them at this narrow pass. The chief stepped forward, and with signals that were a command beckoned the hunters ashore.

As is nearly always the case, the rash man was the one to lose his head, the cautious man the one to keep his presence of mind. Potts was for an attempt at flight, when every bow on both sides of the river would have let fly a shot. Colter was for accepting the situation, trusting to his own wit for subsequent escape.

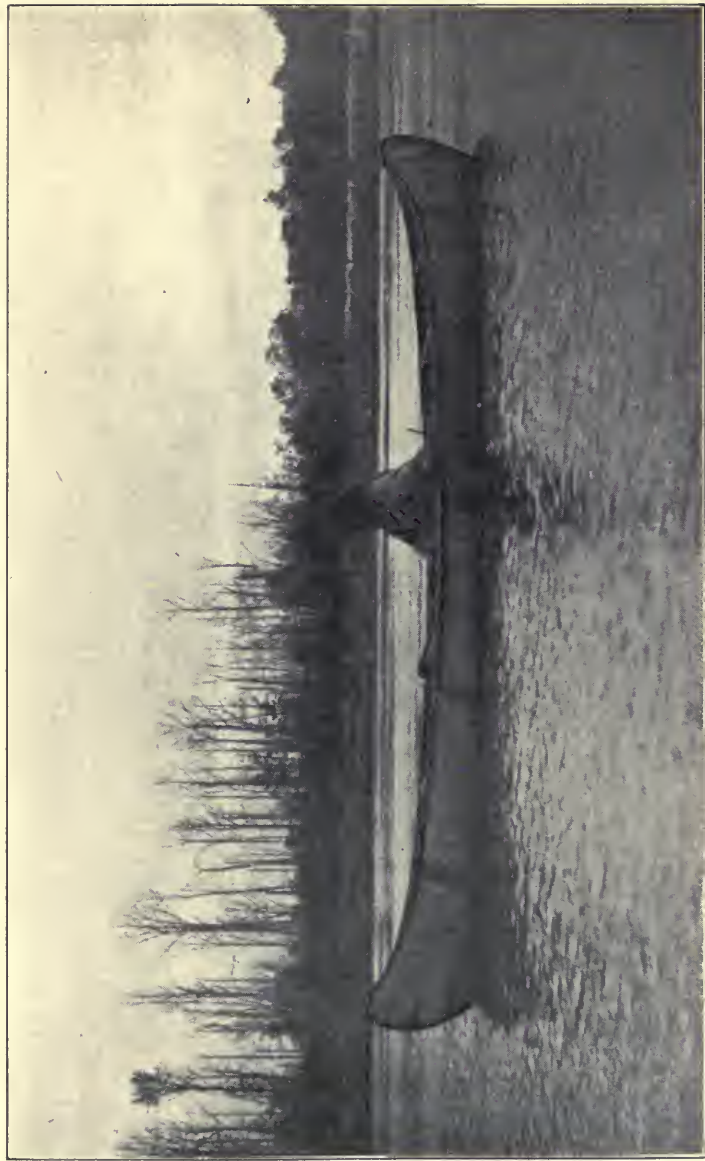
Colter, who was acting as steersman, sent the canoe ashore. Bottom had not grated before a savage snatched Potts's rifle from his hands. Springing ashore, Colter forcibly wrested the weapon back and coolly handed it to Potts.

But Potts had lost all the rash courage of a moment before, and with one push sent the canoe into midstream. Colter shouted at him to come back — come back! Indians have more effective arguments. A bow-string twanged, and Potts screamed out, "Colter, I am wounded!"

Again Colter urged him to land. The wound turned Potts's momentary fright to a paroxysm of rage. Aiming his rifle, he shot his Indian assailant dead. If it was torture that he feared, that act assured him at least a quick death; for, in Colter's language, man and boat were instantaneously "made a riddle of."

No man admires courage more than the Indian; and the Blackfeet recognized in their captive one who had been ready to defend his comrade against them all, and who had led the Crows to victory against their own band.

The prisoner surrendered his weapons. He was stripped naked, but showed neither sign of fear nor made a move to escape. Evidently the Blackfeet could have rare sport with this game white



Ba'tiste — a Fur Hunter of Cumberland Lake — Age 84 — Note the Seven-Banded Birch Bark Canoe.



Getting into Light Rapids.

man. His life in the Indian country had taught him a few words of the Blackfoot language. He heard them conferring as to how he should be tortured to atone for all that the Blackfeet had suffered at white men's hands. One warrior suggested that the hunter be set up as a target and shot at. Would he then be so brave?

But the chief shook his head. That was not game enough sport for Blackfeet warriors. That would be letting a man die passively. And how this man could fight if he had an opportunity! How he could resist torture if he had any chance of escaping the torture!

But Colter stood impassive and listened. Doubtless he regretted having left the well-defended brigades of the fur companies to hunt alone in the wilderness. But the fascination of the wild life is as a gambler's vice — the more a man has, the more he wants. Had not Colter crossed the Rockies with Lewis and Clark and spent two years in the mountain fastnesses? Yet when he reached the Mandans on the way home, the revulsion against all the trammels of civilization moved him so strongly that he asked permission to return to the wilderness, where he spent two more years. Had he not set out for St. Louis a second time, met Lisa coming up the Missouri with a brigade of hunters, and for the third time turned his face to the wilderness? Had he not wandered with the Crows, fought the Blackfeet, gone down to St. Louis, and been impelled by the strange impulse of adventure which was to the hunter what the instinct of migration is to bird and fish and buffalo and all wild things — to go yet again to the wilderness? Such was the passion for the wilds that ruled the life of all free trappers.

The free trappers formed a class by themselves.

Other trappers either hunted on a salary of \$200, \$300, \$400 a year, or on shares, like fishermen of the Grand Banks outfitted by "planters," or like Western prospectors outfitted by companies that supply provisions, boats and horses, expecting in return the major share of profits. The free trappers fitted themselves out,

owed allegiance to no man, hunted where and how they chose, and refused to carry their furs to any fort but the one that paid the highest prices. For the *mangeurs de lard*, as they called the fur company raftsmen, they had a supreme contempt. For the methods of the fur companies, putting rivals to sleep with laudanum or bullet and ever stirring the savages up to warfare, the free trappers had a rough and emphatically expressed loathing.

The crime of corrupting natives can never be laid to the free trapper. He carried neither poison, nor what was worse than poison to the Indian — whiskey — among the native tribes. The free trapper lived on good terms with the Indian, because his safety depended on the Indian. Renegades like Bird, the deserter from the Hudson's Bay Company, or Rose, who abandoned the Astorians, or Beckwourth of apocryphal fame, might cast off civilization and become Indian chiefs; but, after all, these men were not guilty of half so hideous crimes as the great fur companies of boasted respectability. Wyeth of Boston, and Captain Bonneville of the army, whose underlings caused such murderous slaughter among the Root Diggers, were not free trappers in the true sense of the term. Wyeth was an enthusiast who caught the fever of the wilds; and Captain Bonneville, a gay adventurer, whose men shot down more Indians in one trip than all the free trappers of America shot in a century. As for the desperado Harvey, whom Larpenteur reports shooting Indians like dogs, his crimes were committed under the walls of the American Fur Company's fort. MacLellan and Crooks and John Day — before they joined the Astorians — and Boone and Carson and Colter, are names that stand for the true type of free trapper.

The free trapper went among the Indians with no defence but good behavior and the keenness of his wit. Whatever crimes the free trapper might be guilty of towards white men, he was guilty of few towards the Indians. Consequently, free trappers were all through Minnesota and the region westward of the Mississippi forty years before the fur companies dared to venture among

the Sioux. Fisher and Fraser and Woods knew the Upper Missouri before 1806; and Brugiére had been on the Columbia many years before the Astorians came in 1811.

One crime the free trappers may be charged with — a reckless waste of precious furs. The great companies always encouraged the Indians not to hunt more game than they needed for the season's support. And no Indian hunter, uncorrupted by white men, would molest game while the mothers were with their young. Famine had taught them the punishment that follows reckless hunting. But the free trappers were here to-day and away to-morrow, like a Chinaman, to take all they could get regardless of results; and the results were the rapid extinction of fur-bearing game.

Always there were more free trappers in the United States than in Canada. Before the union of Hudson's Bay and Nor' Wester in Canada, all classes of trappers were absorbed by one of the two great companies. After the union, when the monopoly enjoyed by the Hudson's Bay did not permit it literally to drive a free trapper out, it could always "freeze" him out by withholding supplies in its great white northern wildernesses, or by refusing to give him transport. When the monopoly passed away in 1871, free trappers pressed north from the Missouri, where their methods had exterminated game, and carried on the same ruthless warfare on the Saskatchewan. North of the Saskatchewan, where very remoteness barred strangers out, the Hudson's Bay Company still held undisputed sway; and Lord Strathcona, the governor of the company, was able to say a few years ago, "the fur trade is quite as large as ever it was."

Among free hunters, Canada had only one commanding figure — John Johnston of the Soo, who settled at La Pointe on Lake Superior in 1792, formed league with Wabogish, "the White Fisher," and became the most famous trader of the Lakes. His life, too, was almost as eventful as Colter's. A member of the Irish nobility, some secret which he never chose to reveal drove him to the wilds. Wabogish, the "White Fisher," had a daughter who refused the

wooings of all her tribe's warriors. In vain Johnston sued for her hand. Old Wabogish bade the white man go sell his Irish estates and prove his devotion by buying as vast estates in America. Johnston took the old chief at his word, and married the haughty princess of the Lake. When the War of 1812 set all the tribes by the ears, Johnston and his wife had as thrilling adventures as ever Colter knew among the Blackfeet.

Many a free trapper, and partner of the fur companies as well, secured his own safety by marrying the daughter of a chief, as Johnston had. These were not the lightly-come, lightly-go affairs of the vagrant adventurer. If the husband had not cast off civilization like a garment, the wife had to put it on like a garment; and not an ill-fitting garment either, when one considers that the convents of the quiet nuns dotted the wilderness like oases in a desert almost contemporaneous with the fur trade. If the trapper had not sunk to the level of the savages, the little daughter of the chief was educated by the nuns for her new position. I recall several cases where the child was sent across the Atlantic to an English governess so that the equality would be literal and not a sentimental fiction. And yet, on no subject has the western fur trader received more persistent and unjust condemnation. The heroism that culminated in the union of Pocahontas with a noted Virginian won applause, and almost similar circumstances dictated the union of fur traders with the daughters of Indian chiefs; but because the fur trader has not posed as a sentimentalist, he has become more or less of a target for the index finger of the Pharisee.¹

¹ Would not such critics think twice before passing judgment if they recalled that General Parker was a full-blood Indian; that if Johnston had not married Wabogish's daughter and if Johnston's daughter had not preferred to marry Schoolcraft instead of going to her relatives of the Irish nobility, Longfellow would have written no *Hiawatha*? Would they not hesitate before slurring men like Premier Norquay of Manitoba and the famous MacKenzies, those princes of fur trade from St. Louis to the Arctic, and David Thompson, the great explorer? Do they forget that Lord Strathcona, one of the foremost peers of Britain, is related to the proudest race of plain-rangers that ever scoured the West, the *Bois-Brûlés*? The writer knows the West from only fifteen years of life and travel there; yet with that imperfect knowledge cannot recall a single fur post without some tradition of an unfamed Pocahontas.

North of the boundary the free trapper had small chance against the Hudson's Bay Company. As long as the slow-going Mackinaw Company, itself chiefly recruited from free trappers, ruled at the junction of the Lakes, the free trappers held the hunting-grounds of the Mississippi; but after the Mackinaw was absorbed by the aggressive American Fur Company, the free hunters were pushed westward. On the Lower Missouri competition raged from 1810, so that circumstances drove the free trapper westward to the mountains, where he is hunting in the twentieth century as his prototype hunted two hundred years ago.

In Canada — of course after 1870 — he entered the mountains chiefly by three passes: (1) Yellow Head Pass southward of the Athabasca; (2) the narrow gap where the Bow emerges to the plains — that is, the river where the Indians found the best wood for the making of bows; (3) north of the boundary, through that narrow defile overtowered by the lonely flat-crowned peak called Crow's Nest Mountain — that is, where the fugitive Crows took refuge from the pursuing Blackfeet.

In the United States, the free hunters also approached the mountains by three main routes: (1) Up the Platte; (2) westward from the Missouri across the plains; (3) by the Three Forks of the Missouri. For instance, it was coming down the Platte that poor Scott's canoe was overturned, his powder lost, and his rifles rendered useless. Game had retreated to the mountains with spring's advance. Berries were not ripe by the time trappers were descending with their winter's hunt. Scott and his famishing men could not find edible roots. Each day Scott weakened. There was no food. Finally, Scott had strength to go no farther. His men had found tracks of some other hunting party far to the fore. They thought that, in any case, he could not live. What ought they to do? Hang back and starve with him, or hasten forward while they had strength, to the party whose track they had espied? On pretence of seeking roots, they deserted the helpless man. Perhaps they did not come up with the advance party till they were

sure that Scott must have died ; for they did not go back to his aid. The next spring when these same hunters went up the Platte, they found the skeleton of poor Scott sixty miles from the place where they had left him. The terror that spurred the emaciated man to drag himself all this weary distance can barely be conceived ; but such were the fearful odds taken by every free trapper who went up the Platte, across the parched plains, or to the headwaters of the Missouri.

The time for the free trappers to go out was, in Indian language, "when the leaves began to fall." If a mighty hunter like Colter, the trapper was to the savage "big Indian me" ; if only an ordinary vagrant of woods and streams, the white man was "big knife you," in distinction to the red man carrying only primitive weapons. Very often the free trapper slipped away from the fur post secretly, or at night ; for there were questions of licenses which he disregarded, knowing well that the buyer of his furs would not inform for fear of losing the pelts. Also and more important in counselling caution, the powerful fur companies had spies on the watch to dog the free trapper to his hunting-grounds ; and rival hunters would not hesitate to bribe the natives with a keg of rum for all the peltries which the free trapper had already bought by advancing provisions to Indian hunters. Indeed, rival hunters have not hesitated to bribe the savages to pillage and murder the free trapper ; for there was no law in the fur-trading country, and no one to ask what became of the free hunter who went alone into the wilderness and never returned.

Going out alone, or with only one partner, the free hunter encumbered himself with few provisions. Two dollars' worth of tobacco would buy a thousand pounds of "jerked" buffalo meat, and a few gaudy trinkets for a squaw all the pemmican white men could use.

Going by the river routes, four days out from St. Louis brought the trapper into regions of danger. Indian scouts hung on the watch among the sedge of the river bank. One thin line of upcurl-

ing smoke, or a piece of string — *babiche* (leather cord, called by the Indians *assapapish*) — fluttering from a shrub, or little sticks casually dropped on the river bank pointing one way, all were signs that told of marauding bands. Some birch tree was notched with an Indian cipher — a hunter had passed that way and claimed the bark for his next year's canoe. Or the mark might be on a cottonwood — some man wanted this tree for a dugout. Perhaps a stake stood with a mark at the entrance to a beaver-marsh — some hunter had found this ground first and warned all other trappers off by the code of wilderness honor. Notched tree-trunks told of some runner gone across country, blazing a trail by which he could return. Had a piece of fungus been torn from a hemlock log? There were Indians near, and the squaw had taken the thing to whiten leather. If a sudden puff of black smoke spread out in a cone above some distant tree, it was an ominous sign to the trapper. The Indians had set fire to the inside of a punky trunk and the shooting flames were a rallying call.

In the most perilous regions the trapper travelled only after nightfall with muffled paddles — that is, muffled where the handle might strike the gunwale. Camp fires warned him which side of the river to avoid; and often a trapper slipping past under the shadow of one bank saw hobgoblin figures dancing round the flames of the other bank — Indians celebrating their scalp dance. In these places the white hunter ate cold meals to avoid lighting a fire; or if he lighted a fire, after cooking his meal he withdrew at once and slept at a distance from the light that might betray him.

The greatest risk of travelling after dark during the spring floods arose from what the *voyageurs* called *embarras* — trees torn from the banks sticking in the soft bottom like derelicts with branches to entangle the trapper's craft; but the *embarras* often befriended the solitary white man. Usually he slept on shore rolled in a buffalo-robe; but if Indian signs were fresh, he moored his canoe in mid-current and slept under hiding of the driftwood. Friendly Indians did not conceal themselves, but came to the river

bank waving a buffalo-robe and spreading it out to signal a welcome to the white man; when the trapper would go ashore, whiff pipes with the chiefs and perhaps spend the night listening to the tales of exploits which each notch on the calumet typified. Incidents that meant nothing to other men were full of significance to the lone *voyageur* through hostile lands. Always the spring floods drifted down numbers of dead buffalo; and the carrion birds sat on the trees of the shore with their wings spread out to dry in the sun. The sudden flacker of a rising flock betrayed something prowling in ambush on the bank; so did the splash of a snake from overhanging branches into the water.

Different sorts of dangers beset the free trapper crossing the plains to the mountains. The fur company brigades always had escort of armed guard and provision packers. The free trappers went alone or in pairs, picketing horses to the saddle overlaid with a buffalo-robe for a pillow, cooking meals on chip fires, using a slow-burning wormwood bark for matches, and trusting their horses or dog to give the alarm if the bands of coyotes hovering through the night dusk approached too near. On the high rolling plains, hostiles could be descried at a distance, coming over the horizon head and top first like the peak of a sail, or emerging from the "coolies" — dried sloughs — like wolves from the earth. Enemies could be seen soon enough; but where could the trapper hide on bare prairie? He didn't attempt to hide. He simply set fire to the prairie and took refuge on the lee side. That device failing, he was at his enemies' mercy.

On the plains, the greatest danger was from lack of water. At one season the trapper might know where to find good camping streams. The next year when he came to those streams they were dry.

"After leaving the buffalo meadows a dreadful scarcity of water ensued," wrote Charles MacKenzie, of the famous MacKenzie clan. He was journeying north from the Missouri. "We had to alter our course and steer to a distant lake. When we

got there we found the lake dry. However, we dug a pit which produced a kind of stinking liquid which we all drank. It was salt and bitter, caused an inflammation of the mouth, left a disagreeable roughness of the throat, and seemed to increase our thirst. . . . We passed the night under great uneasiness. Next day we continued our journey, but not a drop of water was to be found, . . . and our distress became insupportable. . . . All at once our horses became so unruly that we could not manage them. We observed that they showed an inclination towards a hill which was close by. It struck me that they might have scented water. . . . I ascended to the top, where, to my great joy, I discovered a small pool. . . . My horse plunged in before I could prevent him, . . . and all the horses drank to excess."

"*The plains across*" — which was a western expression meaning the end of that part of the trip — there rose on the west rolling foothills and dark peaked profiles against the sky scarcely to be distinguished from gray cloud banks. These were the mountains; and the real hazards of free trapping began. No use to follow the easiest passes to the most frequented valleys. The fur company brigades marched through these, sweeping up game like a forest fire; so the free trappers sought out the hidden, inaccessible valleys, going where neither pack horse nor *canot à bec d'esturgeon* could follow. How did they do it? Very much the way Simon Fraser's hunters crawled down the river-course named after him. "Our shoes," said one trapper, "did not last a single day."

"We had to plunge our daggers into the ground, . . . otherwise we would slide into the river," wrote Fraser. "We cut steps into the declivity, fastened a line to the front of the canoe, with which some of the men ascended in order to haul it up. . . . Our lives hung, as it were, upon a thread, as the failure of the line or the false step of the man might have hurled us into eternity. . . . We had to pass where no human being should venture. . . . Steps were formed like a ladder on the shrouds of a ship, by poles hanging

to one another and crossed at certain distances with twigs, the whole suspended from the top to the foot of immense precipices, and fastened at both extremities to stones and trees."

He speaks of the worst places being where these frail swaying ladders led up to the overhanging ledge of a shelving precipice.

Such were the very real adventures of the trapper's life, a life whose fascinations lured John Colter from civilization to the wilds again and again till he came back once too often and found himself stripped, helpless, captive, in the hands of the Blackfeet.

It would be poor sport torturing a prisoner who showed no more fear than this impassive white man coolly listening and waiting for them to compass his death. So the chief dismissed the suggestion to shoot at their captive as a target. Suddenly the Blackfoot leader turned to Colter. "Could the white man run fast?" he asked. In a flash Colter guessed what was to be his fate. He, the hunter, was to be hunted. No, he cunningly signalled, he was only a poor runner.

Bidding his warriors stand still, the chief roughly led Colter out three hundred yards. Then he set his captive free, and the exultant shriek of the running warriors told what manner of sport this was to be. It was a race for life.

The white man shot out with all the power of muscles hard as iron-wood and tense as a bent bow. Fear winged the man running for his life to outrace the winged arrows coming from the shouting warriors three hundred yards behind. Before him stretched a plain six miles wide, the distance he had so thoughtlessly paddled between the rampart walls of the cañon but a few hours ago. At the Jefferson was a thick forest growth where a fugitive might escape. Somewhere along the Jefferson was his own hidden cabin.

Across this plain sped Colter, pursued by a band of six hundred shrieking demons. Not one breath did he waste looking back over his shoulder till he was more than half-way across the plain, and could tell from the fading uproar that he was outdistancing

his hunters. Perhaps it was the last look of despair; but it spurred the jaded racer to redoubled efforts. All the Indians had been left to the rear but one, who was only a hundred yards behind.

There was, then, a racing chance of escape! Colter let out in a burst of renewed speed that brought blood gushing over his face, while the cactus spines cut his naked feet like knives. The river was in sight. A mile more, he would be in the wood! But the Indian behind was gaining at every step. Another backward look! The savage was not thirty yards away! He had poised his spear to launch it in Colter's back, when the white man turned, fagged and beaten, threw up his arms and stopped!

This is an Indian *ruse* to arrest the pursuit of a wild beast. By force of habit it stopped the Indian too, and disconcerted him so that instead of launching his spear, he fell flat on his face, breaking the shaft in his hand. With a leap, Colter had snatched up the broken point and pinned the savage through the body to the earth.

That intercepted the foremost of the other warriors, who stopped to rescue their brave and gave Colter time to reach the river.

In he plunged, fainting and dazed, swimming for an island in mid-current where driftwood had formed a sheltered raft. Under this he dived, coming up with his head among branches of trees.

All that day the Blackfeet searched the island for Colter, running from log to log of the drift; but the close-grown brushwood hid the white man. At night he swam downstream like any other hunted animal that wants to throw pursuers off the trail, went ashore and struck across country, seven days' journey for the Missouri Company's fort on the Bighorn River.

Naked and unarmed, he succeeded in reaching the distant fur post, having subsisted entirely on roots and berries.

Chittenden says that poor Colter's adventure only won for him in St. Louis the reputation of a colossal liar. But traditions of his escape were current among all hunters and Indian tribes on

the Missouri, so that when Bradbury, the English scientist, went west with the Astorians in 1811, he sifted the matter, accepted it as truth, and preserved the episode for history in a small-type footnote to his book published in London in 1817.

Two other adventures are on record similar to Colter's: one of Oskononton's escape by diving under a raft, told in Ross's *Fur Hunters*; the other of a poor Indian fleeing up the Ottawa from pursuing Iroquois of the Five Nations and diving under the broken bottom of an old beaver-dam, told in the original *Jesuit Relations*.

And yet when the Astorians went up the Missouri a few years later, Colter could scarcely resist the impulse to go a fourth time to the wilds. But fascinations stronger than the wooings of the wilds had come to his life — he had taken to himself a bride.

CHAPTER VI

THE GREATEST FUR COMPANY OF THE WORLD

IN the history of the world only one corporate company has maintained empire over an area as large as Europe. Only one corporate company has lived up to its constitution for nearly three centuries. Only one corporate company's sway has been so beneficent that its profits have stood in exact proportion to the well-being of its subjects. Indeed, few armies can boast a rank and file of men who never once retreated in three hundred years, whose lives, generation after generation, were one long bivouac of hardship, of danger, of ambushed death, of grim purpose, of silent achievement.

Such was the company of "Adventurers of England Trading into Hudson's Bay," as the charter of 1670 designated them.¹ Such is the Hudson's Bay Company to-day still trading with savages in the white wilderness of the north as it was when Charles II granted a royal charter for the fur trade to his cousin Prince Rupert.

Governors and chief factors have changed with the changing centuries; but the character of the company's personnel has never changed. Prince Rupert, the first governor, was succeeded by the Duke of York (James II); and the royal governor by a long line of distinguished public men down to Lord Strathcona. All have been men of noted achievement, often in touch with the Crown,

¹ The spelling of the name with an apostrophe in the charter seems to be the only reason for the company's name always having the apostrophe, whereas the waters are now known simply as Hudson Bay.

always with that passion for executive and mastery of difficulty which exults most when the conflict is keenest.

Pioneers face the unknown when circumstances push them into it. Adventurers rush into the unknown for the zest of conquering it. It has been to the adventuring class that fur traders have belonged.

Radisson and Groseillers, the two Frenchmen who first brought back word of the great wealth in furs round the Far Northern sea, had been gentlemen adventurers — “rascals,” their enemies called them. Prince Rupert, who leagued himself with the Frenchmen to obtain a charter for his fur trade, had been an adventurer of the high seas — “pirate,” we would say — long before he became first governor of the Hudson’s Bay Company. And the Duke of Marlborough, the company’s third governor, was as great an adventurer as he was a general.

Latterly the word “adventurer” has fallen in such evil repute, it may scarcely be applied to living actors. But using it in the old-time sense of militant hero, what cavalier of gold braid and spurs could be more of an adventurer than young Donald Smith who traded in the desolate wastes of Labrador, spending seventeen years in the hardest field of the fur company, tramping on snowshoes half the width of a continent, camping where night overtook him under blanketing of snow-drifts, who rose step by step from trader on the east coast to commissioner in the west? And this Donald Smith became Lord Strathcona, the governor of the Hudson’s Bay Company.

Men bold in action and conservative in traditions have ruled the company. The governor resident in England is now represented by the chief commissioner, who in turn is represented at each of the many inland forts by a chief factor of the district. Nominally, the fur trader’s northern realm is governed by the Parliament of Canada. Virtually, the chief factor rules as autocratically as he did before the Canadian Government took over the proprietary rights of the fur company.

How did these rulers of the wilds, these princes of the fur trade, live in lonely forts and mountain fastnesses? Visit one of the northern forts as it exists to-day.

The colder the climate, the finer the fur. The farther north the fort, the more typical it is of the fur trader's realm.

For six, seven, eight months of the year, the fur trader's world is a white wilderness of snow; snow water-waved by winds that sweep from the Pole; snow drifted into ramparts round the fort stockades till the highest picket sinks beneath the white flood and the corner bastions are almost submerged and the entrance to the central gate resembles the cutting of a railway tunnel; snow that billows to the unbroken reaches of the circling sky-line like a white sea. East, frost-mist hides the low horizon in clouds of smoke, for the sun which rises from the east in other climes rises from the south-east here; and until the spring equinox, bringing summer with a flood-tide of thaw, gray darkness hangs in the east like a fog. The sun moves across the snowy levels in a wheel of fire, for it has scarcely risen full sphered above the sky-line before it sinks again, etching drift and tip of half-buried brush in long lonely fading shadows. The west shimmers in warm purplish grays, for the moist Chinook winds come over the mountains melting the snow by magic. North, is the cold steel of ice by day; and at night Northern Lights darting through the polar dark like burnished spears.

Christmas day is welcomed at the northern fur post by a firing of cannon from the snow-muffled bastions. Before the stars have faded, chapel services begin. Frequently on either Christmas or New Year's day, a grand feast is given the tawny-skinned *habitués* of the fort, who come shuffling to the main mess-room with no other announcement than the lifting of the latch, and billet themselves on the hospitality of a host that has never turned hungry Indians from its doors.

For reasons well known to the woodcraftsman, a sudden lull falls on winter hunting in December, and all the trappers within

a week's journey from the fort, all the half-breed guides who add to the instinct of native craft the reasoning of the white, all the Indian hunters ranging river-course and mountain have come by snow-shoes and dog train to spend festive days at the fort. A great jangling of bells announces the huskies (dog trains) scampering over the crusted snow-drifts. A babel of barks and curses follows, for the huskies celebrate their arrival by tangling themselves up in their harness and enjoying a free fight.

Dogs unharnessed, in troop the trappers to the banquet-hall, flinging packs of tightly roped peltries down promiscuously, to be sorted next day. One Indian enters just as he has left the hunting-field, clad from head to heel in white caribou with the antlers left on the capote as a decoy. His squaw has togged out for the occasion in a comical medley of brass bracelets and finger-rings, with a bear's claw necklace and ermine ruff which no city connoisseur could possibly mistake for rabbit. If a daughter yet remain unappropriated she will display the gayest attire — red flannel galore, red shawl, red scarf, with perhaps an apron of white fox skin and moccasins garnished in colored grasses. The braves outdo even a vain young squaw. Whole fox, mink or otter skins have been braided to the end of their hair, and hang down in two plaits to the floor. Whitest of buckskin has been ornamented with brightest of beads, and over all hangs the gaudiest of blankets, it may be a musk-ox-skin with the feats of the warrior set forth in rude drawings on the smooth side.

Children and old people, too, come to the feast, for the Indian's stomach is the magnet that draws his soul. Grotesque little figures the children are, with men's trousers shambling past their heels, rabbit-skin coats with the fur turned in, and on top of all some old stove-pipe hat or discarded busby coming half-way down to the urchin's neck. The old people have more resemblance to parchment on gnarled sticks than to human beings. They shiver under dirty blankets with every sort of cast-off rag tied about their limbs, hobbling lame from frozen feet or rheumatism, mumbling

toothless requests for something to eat or something to wear, for tobacco, the solace of Indian woes, or what is next best — tea.

Among so many guests are many needs. One half-breed from a far wintering outpost, where perhaps a white man and this guide are living in a chinked shack awaiting a hunting party's return, arrives at the fort with frozen feet. Little Labree's feet must be thawed out, and sometimes little Labree dies under the process, leaving as a legacy to the chief factor the death-bed pledge that the corpse be taken to a distant tribal burying-ground. And no matter how inclement the winter, the chief factor keeps his pledge, for the integrity of a promise is the only law in the fur trader's realm. Special attentions, too, must be paid those old retainers who have acted as mentors of the fort in times of trouble.

A few years ago it would not have been safe to give this treat inside of fort walls. Rations would have been served through loopholes and the feast held outside the gates; but so faithfully have the Indians become bound to the Hudson's Bay Company there are not any forts in the fur territory where Indians must be excluded.

Of the feast little need be said. Like the camel, the Indian lays up store for the morrow, judging from his capacity for weeks of morrows. His benefactor no more dines with him than a plantation master of the South would have dined with feasting slaves. Elsewhere a bell calls the company officers to breakfast at 7.30, dinner at 1, supper at 7. Officers dine first, white hunters and trappers second, that difference between master and servant being maintained which is part of the company's almost military discipline. In the large forts are libraries, whither resort the officers for the long winter nights. But over the feast wild hilarity reigns.

A French-Canadian fiddler strikes up a tuneless jig that sets the Indians pounding the floor in figureless dances with moccasined heels till mid-day glides into midnight and midnight to morning. I remember hearing of one such mid-day feast in Red River settlement that prolonged itself past four of the second morning. Against the walls sit old folks spinning yarns of the past. There is a print

of Sir George Simpson behind one *raconteur's* head. Ah! yes, the oldest guides all remember Sir George, though half a century has passed since his day. He was the governor who travelled with flags flying from every prow, and cannon firing when he left the forts, and men drawn up in procession like soldiers guarding an emperor when he entered the fur posts with *coureurs* and all the flourish of royal state. Then some story-teller recalls how he has heard the old guides tell of the imperious governor once provoking personal conflict with an equally imperious steersman, who first ducked the governor into a lake they were traversing and then ducked into the lake himself to rescue the governor.

And there is a crucifix high on the wall left by Père Lacombe the last time the famous missionary to the red men of the Far North passed this way; and every Indian calls up some kindness done, some sacrifice by Father Lacombe. On the gun-rack are old muskets and Indian masks and scalp-locks, bringing back the days when Russian traders instigated a massacre at this fort and when white traders flew at each other's throats as Nor' Westers struggled with Hudson's Bay for supremacy in the fur trade.

"Ah, oui, those white men, they were brave fighters, they did not know how to stop. Mais, sacré, they were fools, those white men, after all! Instead of hiding in ambush to catch the foe, those white men measured off paces, stood up face to face and fired blank — oui — fired blank! Ugh! Of course, one fool he was kill' and the other fool, most like, he was wound'! Ugh, by Gar! What Indian would have so little sense?"¹

Of hunting tales, the Indian store is exhaustless. That enormous bear-skin stretched to four pegs on the wall brings up Montagnais, the Noseless One, who still lives on Peace River and once slew the largest bear ever killed in the Rockies, returning to this very fort with one hand dragging the enormous skin and the other holding the place which his nose no longer graced.

¹ To the Indian mind the hand-to-hand duels between white traders were incomprehensible pieces of folly.

"Montagnais? Ah, bien, messieurs! Montagnais, he brave man! Venez ici — bien — so — I tole you 'bout heem," begins some French-Canadian trapper with a strong tinge of Indian blood in his swarthy skin. "Bigosh! He brave man! I tole you 'bout dat happen! Montagnais, he go stumble t'rough snow — how you call dat? — hill, steep — steep! Oui, by Gar! dat vas steep hill! de snow, she go slide, slide, lak' de — de gran' rapeed, see?" emphasizing the snow-slide with illustrative gesture. "Bien, donc! Mais, Montagnais, he stick gun-stock in de snow stop heem fall — so — see? Tonnerre! Bigosh! for sure she go off wan beeg bang! Sacré! She make so much noise she wake wan beeg ol' bear sleep in snow. Montagnais, he tumble on hees back! Mais, messieurs, de bear — diable! 'fore Montagnais wink hees eye de bear jump on top lak' wan beeg loup-garou! Montagnais, he brave man — he not scare — he say wan leetle prayer, wan han' he cover his eyes! Odder han' — sacré — dat grab hees knife out hees belt — sz-sz-sz, messieurs. For sure he feel her breat' — diable! — for sure he fin' de place her heart beat — Tonnerre! Vite! he stick dat knife in straight up hees wrist, into de heart dat bear! Dat bes' t'ing do — for sure de leetle prayer dat tole him best t'ing do! De bear she roll over — over — dead's wan stone — c'est vrai! she no mor' jump top Montagnais! Bien, ma frien'! Montagnais, he roll over too — leetle bit scare! Mais, hees nose! Ah! bigosh! de bear she got dat; dat all nose he ever haf no mor'! C'est vrai, messieurs, bien!"

And with a finishing flourish the story-teller takes to himself all the credit of Montagnais's heroism.

But in all the feasting, trade has not been forgotten; and as soon as the Indians recover from post-prandial torpor bartering begins. In one of the warehouses stands a trader. An Indian approaches with a pack of peltries weighing from eighty to a hundred pounds. Throwing it down, he spreads out the contents. Of otter and mink and pekan there will be plenty, for these fish-eaters are most easily taken before midwinter frost has frozen

the streams solid. In recent years there have been few beaver-skins, a closed season of several years giving the little rodents a chance to multiply. By treaty the Indian may hunt all creatures of the chase as long as "the sun rises and the rivers flow"; but the fur trader can enforce a closed season by refusing to barter for the pelts. Of muskrat skins, hundreds of thousands are carried to the forts every season. The little haycock houses of muskrats offer the trapper easy prey when frost freezes the sloughs, shutting off retreat below, and heavy snowfall has not yet hidden the little creatures' winter home.

The trading is done in several ways. Among the Eskimos, whose arithmetical powers seldom exceed a few units, the trader holds up his hand with one, two, three fingers raised, signifying that he offers for the skin before him equivalents in value to one, two, three prime beaver. If satisfied, the Indian passes over the furs and the trader gives flannel, beads, powder, knives, tea or tobacco to the value of the beaver-skins indicated by the raised fingers. If the Indian demands more, hunter and trader wrangle in pantomime till compromise is effected.

But always beaver-skin is the unit of coin. Beaver are the Indian's dollars and cents, his shillings and pence, his tokens of currency.

South of the Arctics, where native intelligence is of higher grade, the beaver values are represented by goose-quills, small sticks, bits of shell, or, most common of all, discs of lead, tea-chests melted down, stamped on one side with the company arms, on the other with the figures 1, 2, $\frac{1}{2}$, $\frac{1}{4}$, representing so much value in beaver.

First of all, then, furs in the pack must be sorted, silver fox worth many hundred dollars separated from cross fox and blue and white worth more each year, according to quality, and from common red fox worth less. Twenty years ago it was no unusual thing for the Hudson's Bay Company to send to England yearly 10,000 cross fox-skins, 7000 blue, 100,000 red, half a dozen silver. Few wolf-skins are in the trapper's pack unless particularly fine speci-

mens of brown Arctic and white Arctic. Against the wolf, the trapper wages war as against a pest that destroys other game, and not for its skin. Next to muskrat the most plentiful fur taken by the Indian, though not highly esteemed by the trader, will be that of the rabbit or varying hare. Buffalo was once the staple of the hunter. What the buffalo was the white rabbit is to-day. From it the Indian gets clothing, tepee covers, blankets, thongs, food. From it the white man who is a manufacturer of furs gets gray fox and chinchilla and seal in imitation. Except one year in seven, when a rabbit plague spares the land by cutting down their prolific numbers, the varying hare is plentiful enough to sustain the Indian.

Having received so many bits of lead for his furs, the Indian goes to the store counter where begins interminable dickering. Montagnais's squaw has only fifty "beaver" coin, and her desires are a hundredfold what those will buy. Besides, the copper-skinned lady enjoys beating down prices and driving a bargain so well that she would think the clerk a cheat if he asked a fixed price from the first. She expects him to have a sliding scale of prices for his goods as she has for her furs. At the termination of each bargain, so many coins pass across the counter. Frequently an Indian presents himself at the counter without beaver enough to buy necessities. What then? I doubt if in all the years of Hudson's Bay Company rule one needy Indian has ever been turned away. The trader advances what the Indian needs and chalks up so many "beaver" against the trapper's next hunt.

Long ago, when rival traders strove for the furs, whiskey played a disgracefully prominent part in all bartering, the drunk Indian being an easier victim than the sober, and the Indian mad with thirst for liquor the most easily cajoled of all. But to-day, even with competition, whiskey plays no part whatever. Whiskey is in the fort, so is pain killer, for which the Indian has as keen an appetite, both for the exigencies of hazardous life in an unsparing climate beyond medical aid; but the first thing Hudson's Bay

traders did in 1885, when rebel Indians surrounded the Saskatchewan forts, was to split the casks and spill all alcohol. The second thing was to bury ammunition — showing which influence they considered the more dangerous.

Ermine is at its best when the cold is most intense, the tawny weasel coat turning from fawn to yellow, from yellow to cream and snow-white, according to the latitude north and the season. Unless it is the pelt of the baby ermine, soft as swan's down, tail-tip jet as onyx, the best ermine is not likely to be in a pack brought to the fort as early as Christmas.

Fox, lynx, mink, marten, otter and bear, the trapper can take with steel traps of a size varying with the game, or even with the clumsily constructed deadfall, the log suspended above the bait being heavy or light, according to the hunter's expectation of large or small intruder; but the ermine with fur as easily damaged as finest gauze must be handled differently.

Going the rounds of his traps, the hunter has noted curious tiny tracks like the dots and dashes of a telegraphic code. Here are little prints slurring into one another in a dash; there, a dead stop, where the quick-eared stoat has paused with beady eyes alert for snow-bird or rabbit. Here, again, a clear blank on the snow where the crafty little forager has dived below the light surface and wriggled forward like a snake to dart up with a plunge of fangs into the heart-blood of the unwary snow-bunting. From the length of the leaps, the trapper judges the age of the ermine; fourteen inches from nose to tail-tip means a full-grown ermine with hair too coarse to be damaged by a snare. The man suspends the noose of a looped twine across the runway from a twig bent down so that the weight of the ermine on the string sends the twig springing back with a jerk that lifts the ermine off the ground, strangling it instantly. Perhaps on one side of the twine he has left bait — smeared grease, or a bit of meat.

If the tracks are like the prints of a baby's fingers, close and small, the trapper hopes to capture a pelt fit for a throne cloak,

the skin for which the Louis of France used to pay, in modern money, from a hundred dollars to a hundred and fifty dollars. The full-grown ermines will be worth only some few "beaver" at the fort. Perfect fur would be marred by the twine snare, so the trapper devises as cunning a death for the ermine as the ermine devises when it darts up through the snow with its spear-teeth clutched in the throat of a poor rabbit. Smearing his hunting-knife with grease, he lays it across the track. The little ermine comes trotting in dots and dashes and gallops and dives to the knife. It smells the grease, and all the curiosity which has been teaching it to forage for food since it was born urges it to put out its tongue and taste. That greasy smell of meat it knows; but that frost-silvered bit of steel is something new. The knife is frosted like ice. Ice the ermine has licked, so he licks the knife. But alas for the resemblance between ice and steel! Ice turns to water under the warm tongue; steel turns to fire that blisters and holds the foolish little stoat by his inquisitive tongue a hopeless prisoner till the trapper comes. And lest marauding wolverine or lynx should come first and gobble up priceless ermine, the trapper comes soon. And that is the end for the ermine.

Before settlers invaded the valley of the Saskatchewan the furs taken at a leading fort would amount to:

Bear of all varieties	400	Skunk	6
Ermine, medium	200	Wolf	100
Blue fox	4	Beaver	5,000
Red fox	91	Pekan (fisher)	50
Silver fox	3	Cross fox	30
Marten	2,000	White fox	400
Muskrat	200,000	Lynx	400
Mink	8,000	Wolverine	200
Otter	500		

The value of these furs in "beaver" currency varied with the fashions of the civilized world, with the scarcity or plenty of the furs, with the locality of the fort. Before beaver became so scarce,

100 beaver equalled 40 marten or 10 otter or 300 muskrat; 25 beaver equalled 500 rabbit; 1 beaver equalled 2 white fox; and so on down the scale. But no set table of values can be given other than the prices realized at the annual sale of Hudson's Bay furs, held publicly in London.

To understand the values of these furs to the Indian, "beaver" currency must be compared to merchandise, one beaver buying such a red handkerchief as trappers wear around their brows to notify other hunters not to shoot; one beaver buys a hunting-knife, two an axe, from eight to twenty a gun or rifle, according to its quality. And in one old trading list I found — vanity of vanities — "one beaver equals looking-glass."

Trading over, the trappers disperse to their winter hunting-grounds, which the main body of hunters never leaves from October, when they go on the fall hunt, to June, when the long straggling brigades of canoes and keel boats and pack horses and jolting ox-carts come back to the fort with the harvest of winter furs.

Signs unnoted by the denizens of city serve to guide the trappers over trackless wastes of illimitable snow. A whitish haze of frost may hide the sun, or continuous snowfall blur every landmark. What heeds the trapper? The slope of the rolling hills, the lie of the frozen river-beds, the branches of underbrush protruding through billowed drifts are hands that point the trapper's compass. For those hunters who have gone westward to the mountains, the task of threading pathless forest stillness is more difficult. At a certain altitude in the mountains, much frequented by game because undisturbed by storms, snow falls — falls — falls, without ceasing, heaping the pines with snow mushrooms, blotting out the sun, cloaking in heavy white flakes the notched bark blazed as a trail, transforming the rustling green forests to a silent spectral world without a mark to direct the hunter. Here the woodcraftsman's lore comes to his aid. He looks to the snow-coned tops of the pine trees. The tops of pine trees lean ever so slightly towards

the rising sun. With his snow-shoes he digs away the snow at the roots of trees to get down to the moss. Moss grows from the roots of trees on the shady side — that is, the north. And simplest of all, demanding only that a wanderer use his eyes — which the white man seldom does — the limbs of the northern trees are most numerous on the south. The trapper may be waylaid by storms, or starved by sudden migration of game from the grounds to which he has come, or run to earth by the ravenous timber-wolves that pursue the dog teams for leagues; but the trapper with Indian blood in his veins will not be lost.

One imminent danger is of accident beyond aid. A young Indian hunter of Moose Factory set out with his wife and two children for the winter hunting-grounds in the forest south of James Bay. To save the daily allowance of a fish for each dog, they did not take the dog teams. When chopping, the hunter injured his leg. The wound proved stubborn. Game was scarce, and they had not enough food to remain in the lodge. Wrapping her husband in robes on the long toboggan sleigh, the squaw placed the younger child beside him and with the other began tramping through the forest drawing the sleigh behind. The drifts were not deep enough for swift snow-shoeing over underbrush, and their speed was not half so speedy as the hunger that pursues northern hunters like the Fenris Wolf of Norse myth. The woman sank exhausted on the snow and the older boy, nerved with fear, pushed on to Moose Factory for help. Guided by the boy back through the forests, the fort people found the hunter dead in the sleigh, the mother crouched forward unconscious from cold, stripped of the clothing which she had wrapped round the child taken in her arms to warm with her own body. The child was alive and well. The fur traders nursed the woman back to life, though she looked more like a withered creature of eighty than a woman barely in her twenties. She explained with a simple unconsciousness of heroism that the ground had been too hard for her to bury her husband, and she was afraid to

leave the body and go on to the fort lest the wolves should molest the dead.¹

The arrival of the mail packet is one of the most welcome breaks in the monotony of life at the fur post. When the mail comes, all white habitants of the fort take a week's holidays to read letters and news of the outside world.

Railways run from Lake Superior to the Pacific; but off the line of railways mail is carried as of old. In summer-time overland runners, canoe, and company steamers bear the mail to the forts of Hudson Bay, of the Saskatchewan, of the Rockies, and the MacKenzie. In winter, scampering huskies with a running postman winged with snow-shoes dash across the snowy wastes through silent forests to the lonely forts of the bay, or slide over the prairie drifts with the music of tinkling bells and soft crunch-crunch of sleigh runners through the snow crust to the leagueless world of the Far North.

Forty miles a day, a couch of spruce boughs where the racquets have dug a hole in the snow, sleighs placed on edge as a windbreak, dogs crouched on the buffalo-ropes snarling over the frozen fish, deep bayings from the running wolf-pack, and before the stars have faded from the frosty sky, the mail-carrier has risen and is coasting away fast as the huskies can gallop.

Another picturesque feature of the fur trade was the long caravan of ox-carts that used to screech and creek and jolt over the rutted prairie roads between Winnipeg and St. Paul. More than 1500 Hudson's Bay Company carts manned by 500 traders with tawny spouses and black-eyed impish children squatted on top of the load, left Canada for St. Paul in August and returned in October. Carts were made without a rivet of iron. Bent wood formed the tires of the two wheels. Hardwood axles told their woes to the world in the scream of shrill bagpipes. Wooden racks took the place of cart box. In the shafts trod a staid old ox guided from

¹ It need hardly be explained that it is the prairie Indian and not the forest Ojibway who places the body on high scaffolding above the ground; hence the woman's dilemma.

the horns or with a halter, drawing the load with collar instead of a yoke. The harness was of skin thongs. In place of the ox sometimes was a "shagganippy" pony, raw and unkempt, which the imps lashed without mercy or the slightest inconvenience to the horse.

A red flag with the letters H. B. C. in white decorated the leading cart. During the Sioux massacres the fur caravans were unmolested, for the Indians recognized the flags and wished to remain on good terms with the fur traders.

Ox-carts still bring furs to Hudson's Bay Company posts, and screech over the corduroyed swamps of the MacKenzie; but the railway has replaced the caravan as a carrier of freight.

The steamers of several companies now ply on the largest of the inland rivers with long lines of fur-laden barges in tow; but the canoe brigades still bring the winter's hunt to the forts in spring. Five to eight craft make a brigade, each manned by eight paddlers with an experienced steersman, who is usually also guide. But the one ranking first in importance is the bowman, whose quick eye must detect signs of nearing rapids, whose steel-shod pole gives the cue to the other paddlers and steers the craft past foamy reefs. The bowman it is who leaps out first when there is "tracking" — pulling the craft upstream by tow-line — who stands waist high in ice water steadying the rocking bark lest a sudden swirl spill furs to the bottom, who hands out the packs to the others when the waters are too turbulent for "tracking" and there must be a "*portage*," and who leads the brigade on a run — half trot, half amble — overland to the calmer currents. "Pipes" are the measure of a *portage* — that is, the pipes smoked while the *voyageurs* are on the run. The bowman it is who can thread a network of water-ways by day or dark, past rapids or whirlpools, with the certainty of an arrow to the mark. On all long trips by dog train or canoe, pemmican made of deer meat and marrow put in air-tight bags was the standard food. The pemmican now used is of moose or caribou beef.

The only way to get an accurate idea of the size of the kingdom ruled by these monarchs of the lonely wastes is by comparison.

Take a map of North America. On the east is Labrador, a peninsula as vast as Germany and Holland and Belgium and half of France. On the coast and across the unknown interior are the magical letters H. B. C., meaning Hudson's Bay Company fort (past or present), a little whitewashed square with eighteen-foot posts planted picket-wise for a wall, a barracks-like structure across the court-yard with a high lookout of some sort near the gate. Here some trader with wife and children and staff of Indian servants has held his own against savagery and desolating loneliness. In one of these forts Lord Strathcona passed his youth.

Once more to the map. With one prong of a compass in the centre of Hudson Bay, describe a circle. The northern half embraces the baffling Arctics; but on the line of the southern circumference like beads on a string are Churchill high on the left, York below in black capitals as befits the importance of the great fur emporium of the bay, Severn and Albany and Moose and Rupert and Fort George round the south, and to the right, larger and more strongly built forts than in Labrador, with the ruins of stone walls at Churchill that have a depth of fifteen feet. Six-pounders once mounted these bastions. The remnants of galleries for soldiery run round the inside walls. A flag floats over each fort with the letters H. B. C.¹ Officers' dwellings occupy the centre of the court-yard. Banked against the walls are the men's quarters, fur presses, stables, storerooms. Always there is a chapel, at one fort a hospital, at others the relics of stoutly built old powder magazines made to withstand the siege of hand grenades tossed in by French assailants from the bay, who knew that the loot of a fur post was better harvest than a treasure ship. Elsewhere two small bastions situated diagonally across from each other were sufficient to protect the fur post by sending a raking fire along the

¹ The flag was hoisted on Sundays to notify the Indians there would be no trade.

walls; but here there was danger of the French fleet, and the walls were built with bastion and trench and rampart.

Again to the map. Between Hudson Bay and the Rocky Mountains stretches an American Siberia — the Barren Lands. Here, too, on every important water-way, Athabasca and the Liard and the MacKenzie, into the land of winter night and midnight sun extend fur trading posts. We think of these northern streams as ice-jammed, sluggish currents, with mean log villages on their banks. The fur posts of the sub-Arctics are not imposing with picket fences in place of stockades, for no French foe was feared here. But the MacKenzie River is one of the longest in the world, with two tributaries each more than 1000 miles in length. It has a width of a mile, and a succession of rapids that rival the St. Lawrence, and palisaded banks higher than the Hudson River's, and half a dozen lakes into one of which you could drop two New England states without raising a sand bar.

The map again. Between the prairie and the Pacific Ocean is a wilderness of peaks, a Switzerland stretched into half the length of a continent. Here, too, like eagle nests in rocky fastnesses, are fur posts.

Such is the realm of the northern fur trade to-day.

Before 1812 there was no international boundary in the fur trade. But after the war Congress barred out Canadian companies. The next curtailment of hunting-ground came in 1869-1870, when the company surrendered proprietary rights to the Canadian Government, retaining only the right to trade in the vast north land. The formation of new Canadian provinces took place south of the Churchill; but north the traders barter pelts undisturbed as of old. Yearly the staffs are shifted from post to post as the fortunes of the hunt vary; but the principal posts not including winter quarters for a special hunt have probably not exceeded two hundred in number, nor fallen below one hundred for the last century. Of these the greater numbers are of course in the Far North. When the Hudson's Bay Company was fighting

rivals, Nor' Westers from Montreal, Americans from St. Louis, it must have employed as traders, packers, *coureurs*, canoe men, hunters, and guides, at least 5000 men; for its rival employed that number, and "The Old Lady," as the enemy called it, always held her own. Over this wilderness army were from 250 to 300 officers, each with the power of life and death in his hands. To the honor of the company, be it said, this power was seldom abused.¹ Occasionally a brutal sea-captain might use lash and triangle and branding along the northern coast; but officers defenceless among savage hordes must of necessity have lived on terms of justice with their men.

The Canadian Government now exercises judicial functions; but where less than 700 mounted police patrol a territory as large as Siberia, the traders' factor is still the chief representative of the law's power. Times without number under the old *régime* has a Hudson's Bay officer set out alone and tracked an Indian murderer to hidden fastness, there to arrest him or shoot him dead on the spot; because if murder went unpunished that mysterious impulse to kill which is as rife in the savage heart as in the wolf's would work its havoc unchecked.

Just as surely as "the sun rises and the rivers flow" the savage knows when the hunt fails he will receive help from the fur trader. But just as surely he knows if he commits any crime that same unbending, fearless white man will pursue — and pursue — and pursue guilt to the death. One case is on record of a trader thrashing an Indian within an inch of his life for impudence to officers two or three years before. Of course, the vendetta may cut both ways, the Indian treasuring vengeance in his heart till he can wreak it. That is an added reason why the white man's justice must be unimpeachable. "*Pro pelle cutem*," says the motto of the company arms. Without flippancy it might be said, "An eye for an eye and a tooth for a tooth," as well as "A skin for a skin" — which explains the freedom from crime among northern Indians.

¹ Governor Norton will, of course, be recalled as the most conspicuous for his brutality.

And who are the subjects living under this Mosaic paternalism ?

Stunted Eskimos of the Far North, creatures as amphibious as the seals whose coats they wear, with the lustreless eyes of dwarfed intelligence and the agility of seal flippers as they whisk double-bladed paddles from side to side of the darting kyacks ; wandering Montagnais from the domed hills of Labrador, lonely and sad and silent as the naked desolation of their rugged land ; Ojibways soft-voiced as the forest glooms in that vast land of spruce tangle north of the Great Lakes ; Crees and Sioux from the plains, cunning with the stealth of creatures that have hunted and been hunted on the shelterless prairie ; Blackfeet and Crows, game birds of the foothills that have harried all other tribes for tribute, keen-eyed as the eagles on the mountains behind them, glorying in war as the finest kind of hunting ; mountain tribes — Stonies, Kootenais, Shoshonies — splendid types of manhood because only the fittest can survive the hardships of the mountains ; coast Indians, Chinook and Chilcoot — low and lazy because the great rivers feed them with salmon and they have no need to work.

Over these lawless Arabs of the New World wilderness the Hudson's Bay Company has ruled for two and a half centuries with smaller loss of life in the aggregate than the railways of the United States cause in a single year.

Hunters have been lost in the wilds. White trappers have been assassinated by Indians. Forts have been wiped out of existence. Ten, twenty, thirty traders have been massacred at different times. But, then, the loss of life on railways totals up to thousands in a single year.

When fighting rivals long ago, it is true that the Hudson's Bay Company recognized neither human nor divine law. Grant the charge and weigh it against the benefits of the company's rule. When Hearne visited Chippewyans two centuries ago he found the Indians in a state uncontaminated by the trader ; and that state will give the ordinary reader cold shivers of horror at the details of massacre and degradation. Every visitor since had reported the

same tribe improved in standard of living under Hudson's Bay rule. Recently a well-known Canadian governor making an itinerary of the territory round the bay found the Indians such devout Christians that they put his white retinue to shame. Returning to civilization, the governor was observed attending the services of his own denomination with a greater fury than was his wont. Asked the reason, he confided to a club friend that he would be *blanked* if he could allow heathen Indians to be better Christians than he was.

Some of the shiftless Indians may be hopelessly in debt to the company for advanced provisions, but if the company had not made these advances the Indians would have starved, and the debt is never exacted by seizure of the hunt that should go to feed a family.

Of how many other creditors may that be said? Of how many companies that it has cared for the sick, sought the lost, fed the starving, housed the homeless? With all its faults, that is the record of the Hudson's Bay Company.¹

¹ The summer of 1920 saw many of the abuses of the old fights of a hundred years ago repeated. This was owing to the intrusion of drunken gamblers in a new game as told in Part I. Whiskey played the usual part. Indians, resisting the debauchery of whole tribes, did not commit murders; for the mounted police arrest murderers; but they did destroy caches; so the returning buyer coming back on his trail would perish of starvation. Fortunately, the collapse of the gamblers' intrusion on the fur trade has driven these gentry out, ruined. Prices on poor furs collapsed. The bubble of "busting the old companies" has brought its own punishment in no sales for poor furs; and the banks are selling seized furs in foreclosed lien mortgages.

CHAPTER VII

KOOT AND THE BOB-CAT

OLD whaling ships, that tumble round the world and back again from coast to coast over strange seas,⁵ hardly ever suffer any of the terrible disasters that are always overtaking the proud men-of-war and swift liners equipped with all that science can do for them against misfortune. Ask an old salt why this is, and he will probably tell you that he *feels* his way forward or else that he steers by the same chart as *that* — jerking his thumb sideways from the wheel towards some sea gull careening over the billows. A something, that is akin to the instinct of wild creatures warning them when to go north for the summer, when to go south for the winter, when to scud for shelter from coming storm, guides the old whaler across chartless seas.

So it is with the trapper. He may be caught in one of his great steel traps and perish on the prairie. He may run short of water and die of thirst on the desert. He may get his pack horses tangled up in a valley where there is no game and be reduced to the alternative of destroying what will carry him back to safety or starving with a horse still under him, before he can get over the mountains into another valley — but the true trapper will literally never lose himself. Lewis and Clark rightly merit the fame of having first *explored* the Missouri-Columbia route; but years before the Louisiana Purchase, free trappers were already on the Columbia. David Thompson of the North-west Company was the first Canadian to *explore* the lower Columbia; but before Thompson had crossed the Rockies, French hunters were already ranging

the forests of the Pacific slope. How did these coasters of the wilds guide themselves over prairies that were a chartless sea and mountains that were a wilderness? How does the wavey know where to find the rush-grown inland pools? Who tells the caribou mother to seek refuge on islands where the water will cut off the wolves that would prey on her young?

Something, which may be the result of generations of accumulated observation, guides the wavey and the caribou. Something, which may be the result of unconscious inference from a lifetime of observation, guides the man. In the animal we call it instinct, in the man, reason; and in the case of the trapper tracking pathless wilds, the conscious reason of the man seems almost merged in the automatic instinct of the brute. It is not sharp-sightedness — though no man is sharper of sight than the trapper. It is not acuteness of hearing — though the trapper learns to listen with the noiseless stealth of the pencil-eared lynx. It is not touch — in the sense of tactile contact — any more than it is touch that tells a suddenly awakened sleeper of an unexpected noiseless presence in a dark room. It is something deeper than the tabulated five senses, a sixth sense — a sense of *feel*, without contact — a sense on which the whole sensate world writes its record as on a palimpsest. This palimpsest is the trapper's chart, this sense of *feel*, his weapon against the instinct of the brute. What part it plays in the life of every ranger of the wilds can best be illustrated by telling how Koot found his way to the fur post after the rabbit-hunt.

When the midwinter lull falls on the hunt, there is little use in the trapper going far afield. Moose have "yarded up." Bear have "holed up" and the beaver are housed till dwindling stores compel them to come out from their snow-hidden domes. There are no longer any buffalo for the trapper to hunt during the lull; but what buffalo formerly were to the hunter, rabbit are to-day. Shields and tepee covers, moccasins, caps and coats, thongs and meat, the buffalo used to supply. These are now supplied by

"wahboos — little white chap," which is the Indian name for rabbit.

And there is no midwinter lull for "wahboos." While the "little white chap" runs, the long-haired, owl-eyed lynx of the northern forest runs too. So do all the lynx's feline cousins, the big yellowish cougar of the mountains slouching along with his head down and his tail lashing and a footstep as light and sinuous and silent as the motion of a snake; the short-haired lucifee gorging himself full of "little white chaps" and stretching out to sleep on a limb in a dapple of sunshine and shadow so much like the lucifee's skin not even a wolf would detect the sleeper; the bunchy bob-cat bounding and skimming over the snow for all the world like a bouncing football done up in gray fur — all members of the cat tribe running wherever the "little white chaps" run.

So when the lull fell on the hunt and the mink trapping was well over and marten had not yet begun, Koot gathered up his traps, and getting a supply of provisions at the fur post, crossed the white wastes of prairie to lonely swamp ground where dwarf alder and willow and cottonwood and poplar and pine grew in a tangle. A few old logs dovetailed into a square made the wall of a cabin. Over these he stretched the canvas of his tepee for a roof at a sharp enough angle to let the heavy snowfall slide off from its own weight. Moss chinked up the logs. Snow banked out the wind. Pine boughs made the floor, two logs with pine boughs, a bed. An odd-shaped stump served as chair or table; and on the logs of the inner walls hung wedge-shaped slabs of cedar to stretch the skins. A caribou curtain or bear-skin across the entrance completed Koot's winter quarters for the rabbit hunt.

Koot's genealogy was as vague as that of all old trappers hanging round fur posts. Part of him — that part which served best when he was on the hunting-field — was Ojibway. The other part, which made him improvise logs into chair and table and bed, was white man; and that served him best when he came to bargain with the chief factor over the pelts. At the fur post he attended

the Catholic mission. On the hunting-field, when suddenly menaced by some great danger, he would cry out in the Indian tongue words that meant "O Great Spirit!" And it is altogether probable that at the mission and on the hunting-field, Koot was worshipping the same Being. When he swore—strange commentary on civilization—he always used white man's oaths, French *patois* or straight English.

Though old hermits may be found hunting alone through the Rockies, Idaho, Washington, and Minnesota, trappers do not usually go to the wilds alone; but there was so little danger in rabbit-snaring that Koot had gone out accompanied by only the mongrel dog that had drawn his provisions from the fort on a sort of toboggan sleigh.

The snow is a white page on which the wild creatures write their daily record for those who can read. All over the white swamp were little deep tracks; here, holes as if the runner had sunk; there, padded marks as from the bound—bound—bound of something soft; then, again, where the thicket was like a hedge with only one breach through, the footprints had beaten a little hard rut walled by the soft snow. Koot's dog might have detected a motionless form under the thicket of spiny shrubs, a form that was gray almost to whiteness and scarcely to be distinguished from the snowy underbrush but for the blink of a prism light—the rabbit's eye. If the dog did catch that one telltale glimpse of an eye which a cunning rabbit would have shut, true to the training of his trapper master he would give no sign of the discovery except perhaps the pricking forward of both ears. Koot himself preserved as stolid a countenance as the rabbit playing dead or simulating a block of wood. Where the footprints ran through the breached hedge, Koot stooped down and planted little sticks across the runway till there was barely room for a weasel to pass. Across the open he suspended a looped string hung from a twig bent so that the slightest weight in the loop would send it up with a death jerk for anything caught in the tightening twine.

All day long, Koot goes from hedge to hedge, from runway to runway, choosing always the places where natural barriers compel the rabbit to take this path and no other, travelling if he can in a circle from his cabin so that the last snare set will bring him back with many a zigzag to the first snare made. If rabbits were plentiful — as they always were in the fur country of the North except during one year in seven when an epidemic spared the land from a rabbit pest — Koot's circuit of snares would run for miles through the swamp. Traps for large game would be set out so that the circuit would require only a day; but where rabbits are numerous, the foragers that prey — wolf and wolverine and lynx and bob-cat — will be numerous, too; and the trapper will not set out more snares than he can visit twice a day. Noon — the Indian's hour of the short shadow — is the best time for the first visit, nightfall, the time of no shadow at all, for the second. If the trapper has no wooden door to his cabin, and in it — instead of caching in a tree — keeps fish or bacon that may attract marauding wolverine, he will very probably leave his dogs on guard while he makes the round of the snares.

Finding tracks about the shack when he came back for his noonday meal, Koot shouted sundry instructions into the mongrel's ear, emphasized them with a moccasin kick, picked up the sack in which he carried bait, twine, and traps, and set out in the evening to make the round of his snares, unaccompanied by the dog. Rabbit after rabbit he found, gray and white, hanging stiff and stark, dead from their own weight, strangled in the twine snares. Snares were set anew, the game strung over his shoulder, and Koot was walking through the gray gloaming for the cabin when that strange sense of *feel* told him that he was being followed. What was it? Could it be the dog? He whistled — he called it by name.

In all the world, there is nothing so ghostly silent, so deathly quiet as the swamp woods, muffled in the snow of midwinter, just at nightfall. By day, the grouse may utter a lonely cluck-cluck, or the snow-buntings chirrup and twitter and flutter from drift to

hedge-top, or the saucy jay shriek some scolding impudence. A squirrel may chatter out his noisy protest at some thief for approaching the nuts which lie cached under the rotten leaves at the foot of the tree, or the sun-warmth may set the melting snow showering from the swan's-down branches with a patter like rain. But at nightfall the frost has stilled the drip of thaw. Squirrel and bird are wrapped in the utter quiet of a gray darkness. And the marauders that fill midnight with sharp bark, shrill trembling scream, deep baying over the snow, are not yet abroad in the woods. All is shadowless — stillness — a quiet that is audible.

Koot turned sharply and whistled and called his dog. There wasn't a sound. Later when the frost began to tighten, sap-frozen twigs would snap. The ice of the swamp, frozen like rock, would by-and-by crackle with the loud echo of a pistol-shot — crackle — and strike — and break as if artillery were firing a fusillade and infantry shooters answering sharp. By-and-by, moon and stars and Northern Lights would set the shadows dancing; and the wail of the cougar would be echoed by the lifting scream of its mate. But now, was not a sound, not a motion, not a shadow, only the noiseless stillness, the shadowless quiet, and the *feel*, the *feel* of something back where the darkness was gathering like a curtain in the bush.

It might, of course, be only a silly long-ears loping under cover parallel to the man, looking with rabbit curiosity at this strange newcomer to the swamp home of the animal world. Koot's sense of *feel* told him that it wasn't a rabbit; but he tried to persuade himself that it was, the way a timid listener persuades herself that creaking floors are burglars. Thinking of his many snares, Koot smiled and walked on. Then it came again, that *feel* of something coursing behind the underbrush in the gloom of the gathering darkness. Koot stopped short — and listened — and listened — listened to a snow-muffled silence, to a desolating solitude that pressed in on the lonely hunter like the waves of a limitless sea round a drowning man.

The sense of *feel* that is akin to brute instinct gave him the impression of a presence. Reason that is man's told him what it might be and what to do. Was he not carrying the snared rabbits over his shoulder? Some hungry flesh-eater, more blood-thirsty than courageous, was still hunting him for the food on his back and only lacked the courage to attack. Koot drew a steel trap from his bag. He did not wish to waste a rabbit-skin, so he baited the spring with a piece of fat bacon, smeared the trap, the snow, everything that he had touched with a rabbit-skin, and walked home through the deepening dark to the little log cabin where a sharp "woof-woof" of welcome awaited him.

That night, in addition to the skins across the doorway, Koot jammed logs athwart—"to keep the cold out," he told himself. Then he kindled a fire on the rough stone hearth built at one end of the cabin and with the little clay pipe beneath his teeth sat down on the stump chair to broil rabbit. The waste of the rabbit he had placed in traps outside the lodge. Once his dog sprang alert with pricked ears. Man and dog heard the sniff—sniff—sniff of some creature attracted to the cabin by the smell of broiling meat, and now rummaging at its own risk among the traps. And once when Koot was stretched out on a bear-skin before the fire puffing at his pipe-stem, drying his moccasins and listening to the fusillade of frost rending ice and earth, a long low piercing wail rose and fell and died away. Instantly from the forest of the swamp came the answering scream—a lifting, tumbling, eldritch shriek.

"I should have set two traps," says Koot. "They are out in pairs."

Black is the flag of danger to the rabbit world. The antlered shadows of the naked poplar or the tossing arms of the restless pines, the rabbit knows to be harmless shadows unless their dapple of sun and shade conceals a brindled cat. But a shadow that walks and runs means to the rabbit a foe; so the wary trapper prefers to visit his snares at the hour of the short shadow.

It did not surprise the trapper after he had heard the lifting wail from the swamp woods the night before that the bacon in the trap lay untouched. The still hunter that had crawled through the underbrush lured by the dead rabbits over Koot's shoulder wanted rabbit, not bacon. But at the nearest rabbit snare, where a poor dead prisoner had been torn from the twine, were queer padded prints in the snow, not of the rabbit's making. Koot stood looking at the telltale mark. The dog's ears were all aprick. So was Koot's sense of *feel*, but he couldn't make this thing out. There was no trail of approach or retreat. The padded print of the thief was in the snow as if the animal had dropped from the sky and gone back to the sky.

Koot measured off ten strides from the rifled snare and made a complete circuit round it. The rabbit runway cut athwart the snow circle, but no mark like that shuffling padded print.

"It isn't a wolverine, and it isn't a fisher, and it isn't a coyote," Koot told himself.

The dog emitted stupid little sharp barks, looking everywhere and nowhere as if he felt what he could neither see nor hear. Koot measured off ten strides more from this circuit and again walked completely round the snare. Not even the rabbit runways cut this circle. The white man grows indignant when baffled, the Indian superstitious. The part that was white man in Koot sent him back to the scene in quick jerky steps to scatter poisoned rabbit meat over the snow and set a trap in which he readily sacrificed a full-grown bunny. The part that was Indian set a world of old memories echoing, memories that were as much Koot's nature as the swarth of his skin, memories that Koot's mother and his mother's ancestors held of the fabulous man-eating wolf called the loup-garou, and the great white beaver, father of all beavers and all Indians, that glided through the swamp mists at night like a ghost, and the monster grizzly that stalked with uncouth gambols through the dark devouring benighted hunters.

This time when the mongrel uttered his little sharp barkings

that said plainly as a dog could speak, "Something's somewhere! Be careful there — oh! — I'll be *on* to you in just one minute!" Koot kicked the dog hard with plain anger; and his anger was at himself because his eyes and his ears failed to localize, to *realize*, to visualize what those little pricks and shivers tingling down to his finger-tips meant. Then the civilized man came uppermost in Koot and he marched off very matter-of-fact to the next snare.

But if Koot's vision had been as acute as his sense of *feel* and he had glanced up to the topmost spreading bough of a pine just above the snare, he might have detected lying in a dapple of sun and shade something with large owl eyes, something whose pencilled ear-tufts caught the first crisp of the man's moccasins over the snow-crust. Then the ear-tufts were laid flat back against a furry form hardly differing from the dapple of sun and shade. The big owl eyes closed to a tiny blinking slit that let out never a ray of tell-tale light. The big round body mottled gray and white like the snowy tree widened — stretched — flattened till it was almost a part of the tossing pine bough. Only when the man and dog below the tree had passed far beyond did the pencilled ears blink forward and the owl eyes open and the big body bunch out like a cat with elevated haunches ready to spring.

But by-and-by the man's snares began to tell on the rabbits. They grew scarce and timid. And the thing that had rifled the rabbit snares grew hunger-bold. One day when Koot and the dog were skimming across the billowy drifts, something black far ahead bounced up, caught a bunting on the wing, and with another bounce disappeared among the trees.

Koot said one word — "Cat!" — and the dog was off full cry.

Ever since he had heard that wailing call from the swamp woods, he had known that there were rival hunters, the keenest of all still hunters among the rabbits. Every day he came upon the trail of their ravages, rifled snares, dead squirrels, torn feathers, even the remains of a fox or a coon. And sometimes he could tell from

the printings on the white page that the still hunter had been hunted full cry by coyote or timber-wolf. Against these wolfish foes the cat had one sure refuge always — a tree. The hungry coyote might try to starve the bob-cat into surrender; but just as often, the lynx could starve the coyote into retreat; for if a foolish rabbit darted past, what hungry coyote could help giving chase? The tree had even defeated both dog and man that first week when Koot could not find the cat. But a dog in full chase could follow the trail to a tree, and a man could shoot into the tree.

As the rabbits decreased, Koot set out many traps for the lynx now reckless with hunger, steel traps and deadfalls and pits and log pens with a live grouse clucking inside. The midwinter lull was a busy season for Koot.

Towards March, the sun-glare has produced a crust on the snow that is almost like glass. For Koot on his snow-shoes this had no danger; but for the mongrel that was to draw the pelts back to the fort, the snow crust was more troublesome than glass. Where the crust was thick, with Koot leading the way snow-shoes and dog and toboggan glided over the drifts as if on steel runners. But in midday the crust was soft and the dog went floundering through as if on thin ice, the sharp edge cutting his feet. Koot tied little buck-skin sacks round the dog's feet and made a few more rounds of the swamp; but the crust was a sign that warned him it was time to prepare for the marten-hunt. To leave his furs at the fort, he must cross the prairie while it was yet good travelling for the dog. Dismantling the little cabin, Koot packed the pelts on the toboggan, roped all tightly so there could be no spill from an upset, and putting the mongrel in the traces, led the way for the fort one night when the snow-crust was hard as ice.

The moon came up over the white fields in a great silver disc. Between the running man and the silver moon moved black skulking forms — the foragers on their night hunt. Sometimes a fox loped over a drift, or a coyote rose ghostly from the snow, or timber-

wolves dashed from wooded ravines and stopped to look till Koot fired a shot that sent them galloping.

In the dark that precedes daylight, Koot camped beside a grove of poplars — that is, he fed the dog a fish, whittled chips to make a fire and boil some tea for himself, then digging a hole in the drift with his snow-shoe, laid the sleigh to windward and cuddled down between bear-skins with the dog across his feet.

Daylight came in a blinding glare of sunshine and white snow. The way was untrodden. Koot led at an ambling run, followed by the dog at a fast trot, so that the trees were presently left far on the offing and the runners were out on the bare white prairie with never a mark, tree or shrub, to break the dazzling reaches of sunshine and snow from horizon to horizon. A man who is breaking the way must keep his eyes on the ground; and the ground was so blindingly bright that Koot began to see purple and yellow and red patches dancing wherever he looked on the snow. He drew his capote over his face to shade his eyes; but the pace and the sun grew so hot that he was soon running again unprotected from the blistering light.

Towards the afternoon, Koot knew that something had gone wrong. Some distance ahead, he saw a black object against the snow. On the unbroken white, it looked almost as big as a barrel and seemed at least a mile away. Lowering his eyes, Koot let out a spurt of speed, and the next thing he knew he had tripped his snow-shoe and tumbled. Scrambling up, he saw that a stick had caught the web of his snow-shoe; but where was the barrel for which he had been steering? There wasn't any barrel at all — the barrel was this black stick which hadn't been fifty yards away. Koot rubbed his eyes and noticed that black and red and purple patches were all over the snow. The drifts were heaving and racing after each other like waves on an angry sea. He did not go much farther that day; for every glint of snow scorched his eyes like a hot iron. He camped at the first bluff and made a poultice of cold tea leaves which he laid across his blistered face for the night.

Anyone who knows the tortures of snow-blindness will understand why Koot did not sleep that night. It was a long night to the trapper, such a very long night that the sun had been up for two hours before its heat burned through the layers of his capote into his eyes and roused him from sheer pain. Then he sprang up, put up an ungauntleted hand and knew from the heat of the sun that it was broad day. But when he took the bandage off his eyes, all he saw was a black curtain one moment, rockets and wheels and dancing patches of purple fire the next.

Koot was no fool to become panicky and feeble from sudden peril. He knew that he was snow-blind on a pathless prairie at least two days away from the fort. To wait until the snow-blindness had healed would risk the few provisions that he had and perhaps expose him to a blizzard. The one rule of the trapper's life is to go ahead, let the going cost what it may; and drawing his capote over his face, Koot went on.

The heat of the sun told him the directions; and when the sun went down, the crooning west wind, bringing thaw and snow-crust, was his compass. And when the wind fell, the tufts of shrub-growth sticking through the snow pointed to the warm south. Now he tied himself to his dog; and when he camped beside trees into which he had gone full crash before he knew they were there, he laid his gun beside the dog and sleigh. Going out the full length of his cord, he whittled the chips for his fire and found his way back by the cord.

On the second day of his blindness, no sun came up; nor could he guide himself by the feel of the air, for there was no wind. It was one of the dull, dead, gray days that precede storms. How would he get his directions to set out? Memory of last night's travel might only lead him on the endless circling of the lost. Koot dug his snow-shoe to the base of a tree, found moss, felt it growing on only one side of the tree, knew that side must be the shady cold side, and so took his bearings from what he thought was the north.

Koot said the only time that he knew fear was on the evening of the last day. The atmosphere boded storm. The fort lay in a valley. Somewhere between Koot and that valley ran a trail. What if he had crossed the trail? What if the storm came and wiped out the trail before he could reach the fort? All day, whiskey-jack and snow-bunting and fox scurried from his presence; but this night in the dusk when he felt forward on his hands and knees for the expected trail, the wild creatures seemed to grow bolder. He imagined that he felt the pursuers closer than on the other nights. And then the fearful thought came that he might have passed the trail unheeding. Should he turn back?

Afraid to go forward or back, Koot sank on the ground, unhooded his face and tried to *force* his eyes to see. The pain brought biting, salty tears. It was quite useless. Either the night was very dark, or the eyes were very blind.

And then white man or Indian — who shall say which came uppermost? — Koot cried out to the Great Spirit. In mockery back came the saucy scold of a jay.

But that was enough for Koot — it was prompt answer to his prayer; for where do the jays quarrel and fight and flutter but on the trail? Running eagerly forward, the trapper felt the ground. The rutted marks of a “jumper” sleigh cut the hard crust. With a shout, Koot headed down the sloping path to the valley where lay the fur post, the low hanging smoke of whose chimneys his eager nostrils had already sniffed.

CHAPTER VIII

OTHER LITTLE ANIMALS BESIDES WAHBOOS THE RABBIT—BEING
AN ACCOUNT OF MUSQUASH THE MUSKRAT, SIKAK THE
SKUNK, WENUSK THE BADGER, AND OTHERS

I

Musquash the Muskrat

EVERY chapter in the trapper's life is not a "stunt."

There are the uneventful days when the trapper seems to do nothing but wander aimlessly through the woods over the prairie along the margin of rush-grown marshy ravines where the stagnant waters lap lazily among the flags, though a feathering of ice begins to rim the quiet pools early in autumn. Unless he is duck-shooting down there in the hidden slough where is a great "quack-quack" of young teals, the trapper may not uncase his gun. For a whole morning he lies idly in the sunlight beside some river where a roundish black head occasionally bobs up only to dive under when it sees the man. Or else he sits by the hour still as a statue on the mossy log of a swamp where a long wriggling-wriggling trail marks the snaky motion of some creature below the amber depths.

To the city man whose days are regulated by clock-work and electric trams with the ceaseless iteration of gongs and "step fast there!" such a life seems the type of utter laziness. But the best-learned lessons are those imbibed unconsciously and the keenest pleasures come unsought. Perhaps when the great profit-and-loss account of the hereafter is cast up, the trapper may be found to have a greater sum total of happiness, of usefulness, of real knowledge than the multi-millionaire whose life was one buzzing round of drive and worry and grind. Usually the busy city man has spent nine or ten of the most precious years of his youth in study

and travel to learn other men's thoughts for his own life's work. The trapper spends an idle month or two of each year wandering through a wild world learning the technic of his craft at first hand. And the trapper's learning is all done leisurely, calmly, without bluster or drive, just as nature herself carries on the work of her realm.

On one of these idle days when the trapper seems to be slouching so lazily over the prairie comes a whiff of dank growth on the crisp autumn air. Like all wild creatures travelling up-wind, the trapper at once heads a windward course. It comes again, just a whiff as if the light green musk-plant were growing somewhere on a dank bank. But ravines are not dank in the clear fall days; and by October the musk-plant has wilted dry. This is a fresh living odor with all the difference between it and dead leaves that there is between June roses and the dried dust of a rose jar. The wind falls. He may not catch the faintest odor of swamp growth again, but he knows there must be stagnant water somewhere in these prairie ravines; and a sense that is part *feel*, part intuition, part inference from what the wind told of the marsh smell, leads his footsteps down the browned hillside to the soggy bottom of a slough.

A covey of teals — very young, or they would not be so bold — flackers up, wings about with a clatter, then settles again a space farther ahead when the ducks see that the intruder remains so still. The man parts the flags, sits down on a log motionless as the log itself — and watches! Something else had taken alarm from the crunch of the hunter's moccasins through the dry reeds; for a slimy trail is there, showing where a creature has dived below and is running among the wet under-tangle. Not far off on another log deep in the shade of the highest flags solemnly perches a small prairie-owl. It is almost the russet shade of the dead log. It hunches up and blinks stupidly at all this noise in the swamp.

"Oho," thinks the trapper, "so I've disturbed a still hunt," and he sits if anything stiller than ever, only stooping to lay his gun down and pick up a stone.

At first there is nothing but the quacking of the ducks at the far end of the swamp. A lapping of the water against the brittle flags and a water-snake has splashed away to some dark haunt. The whiskey-jack calls out officious note from a topmost bough, as much as to say: "It's all right! Me—me!—I'm always there! — I've investigated! — it's all right! — he's quite harmless!" And away goes the jay on business of state among the gopher mounds.

Then the interrupted activity of the swamp is resumed, scolding mother ducks reading the riot act to young teals, old geese coming craning and craning their long necks to drink at the water's edge, lizards and water-snakes splashing down the banks, midgets and gnats sunning themselves in clouds during the warmth of the short autumn days, with a feel in the air as of crisp ripeness, drying fruit, the harvest-home of the year. In all the prairie region north and west of Minnesota — the Indian land of "sky-colored water" — the sloughs lie on the prairie under a crystal sky that turns pools to silver. On this almost motionless surface are mirrored as if by an etcher's needle the sky above, feathered wind clouds, flag stems, surrounding cliffs, even the flight of birds on wing. As the mountains stand for majesty, the prairies for infinity, so the marsh lands are types of repose.

But it is not a lifeless repose. Barely has the trapper settled himself when a little sharp black nose pokes up through the water at the fore end of the wriggling trail. A round rat-shaped head follows this twitching proboscis. Then a brownish earth-colored body swims with a wriggling sidelong movement for the log, where roosts the blinking owlet. A little noiseless leap! and a dripping muskrat with long flat tail and webbed feet scrabbles up the moss-covered tree towards the stupid bird. Another moment, and the owl would have toppled into the water with a pair of sharp teeth clutched to its throat. Then the man shies a well-aimed stone!

Splash! Flop! The owl is flapping blindly through the flags to another hiding-place, while the wriggle-wriggle of the waters tells where the marsh-rat has darted away under the tangled

growth. From other idle days like these, the trapper has learned that muskrats are not solitary but always to be found in colonies. Now if the muskrat were as wise as the beaver to whom the Indians say he is closely akin, that alarmed marauder would carry the news of the man-intruder to the whole swamp. Perhaps if the others remembered from the prod of a spear or the flash of a gun what man's coming meant, that news would cause terrified flight of every muskrat from the marsh. But musquash — little beaver, as the Indians call him — is not so wise, not so timid, not so easily frightened from his home as *amisk*,¹ the beaver. In fact, nature's provision for the muskrat's protection seems to have emboldened the little rodent almost to the point of stupidity. His skin is of that burnt umber shade hardly to be distinguished from the earth. At one moment his sharp nose cuts the water, at the next he is completely hidden in the soft clay of the under-tangle; and while you are straining for a sight of him through the pool, he has scurried across a mud bank to his burrow.

Hunt him as they may, men and boys and ragged squaws wading through swamps knee-high, yet after a century of hunting from the Chesapeake and the Hackensack to the swamps of "sky-colored water" on the far prairie, little musquash still yields 7,000,000 pelts a year with never a sign of diminishing. A hundred years ago, in 1788, so little was muskrat held in esteem as a fur, the great North-west Company of Canada sent out only 17,000 or 20,000 skins a year. So rapidly did muskrat grow in favor as a lining and imitation fur that in 1888 it was no unusual thing for 200,000 muskrat-skins to be brought to a single Hudson's Bay Company fort. In Canada the climate compels the use of heavier furs than in the United States, so that the all-fur coat is in greater

¹ *Amisk*, the Chippewyan, *umisk*, the Cree, with much the same sound. A well-known trader told the writer that he considered the variation in Indian language more a matter of dialect than difference in meaning, and that while he could speak only Ojibway he never had any difficulty in understanding and being understood by Cree, Chippewyan, and Assiniboine. For instance, rabbit, "the little white chap," is *wahboos* on the Upper Ottawa, *wapus* on the Saskatchewan, *wapauce* on the MacKenzie.

demand than the fur-lined; but in Canada, not less than 2,000,000 muskrat furs are taken every year. In the United States the total is close on 4,000,000. In one city alone, in Brooklyn, 4 million muskrat-skins are cured every year. A single stretch of good marsh ground has yielded that number of skins year after year without a sign of the hunt telling on the prolific little musquash.

What is the secret of the muskrat's survival while the strong creatures of the chase like buffalo and timber-wolf have been almost exterminated? In the first place, settlers can't farm swamps; so the muskrat thrives just as well in the swamps of New Jersey to-day as when the first white hunter set foot in America. Then musquash lives as heartily on owls and frogs and snakes as on water mussels and lily-pads. If one sort of food fails, the muskrat has as omnivorous powers of digestion as the bear and changes his diet. Then he can hide as well in water as on land. And most important of all, muskrat's family is as numerous as a cat's, five to nine rats in a litter, and two or three litters a year. These are the points that make for little musquash's continuance in spite of all that shot and trap can do.

Having discovered what the dank whiff, half animal, half vegetable, signified, the trapper sets about finding the colony. He knows there is no risk of the little still hunter carrying alarm to the other muskrats. If he waits, it is altogether probable that the fleeing muskrat will come up and swim straight for the colony. On the other hand, the muskrat may have scurried overland through the rushes. Besides, the trapper observed tracks, 'tiny leaf-like tracks as of little webbed feet, over the soft clay of the marsh bank. These will lead to the colony, 'so the trapper rises and parting the rushes not too noisily, follows the little footprint along the margin of the swamp.

Here the track is lost at the narrow ford of an inflowing stream, but across the creek lies a fallen poplar littered with — what? The feathers and bones of a dead owlet. Balancing himself — how much better the moccasins cling than boots! — the trapper crosses

the log and takes up the trail through the rushes. But here musquash has dived off into the water for the express purpose of throwing a possible pursuer off the scent. But the tracks betrayed which way musquash was travelling; so the trapper goes on, knowing if he does not find the little haycock houses on this side, he can cross to the other.

Presently, he almost stumbles over what sent the muskrat diving just at this place. It is the wreck of a wolverine's ravage — a little wattled dome-shaped house exposed to that arch-destroyer by the shrinking of the swamp. So shallow has the water become, that a wolverine has easily waded and leaped clear across to the roof of the muskrat's house. A beaver-dam two feet thick cannot resist the onslaught of the wolverine's claws; how much less will this round nest of reeds and grass and mosses cemented together with soft clay! The roof has been torn from the domed house, leaving the inside bare and showing plainly the domestic economy of the muskrat home, smooth round walls inside, a floor or gallery of sticks and grasses, where the family had lived in an air chamber above the water, rough walls below the water-line and two or three little openings that must have been safely under water before the swamp receded. Perhaps a mussel or lily bulb has been left in the deserted larder. From the oozy slime below the mid-floor to the topmost wall will not measure more than two or three feet. If the swamp had not dried here, the stupid little muskrats that escaped the ravager's claws would probably have come back to the wrecked house, built up the torn roof, and gone on living in danger till another wolverine came. But a water doorway the muskrat must have. That he has learned by countless assaults on his house-top, so when the marsh retreated the muskrats abandoned their house.

All about the deserted house are runways, tiny channels across oozy peninsulas and islands of the muskrat's diminutive world such as a very small beaver might make. The trapper jumps across to a dry patch or mound in the midst of the slimy bottom and

prods an earth bank with a stick. It is as he thought — hollow; a muskrat burrow or gallery in the clay wall where the refugees from this house had scuttled from the wolverine. But now all is deserted. The water has shrunk — that was the danger signal to the muskrat; and there had been a grand moving to a deeper part of the swamp. Perhaps, after all, this is a very old house not used since last winter.

Going back to the bank, the trapper skirts through the crush of brittle rushes round the swamp. Coming sharply on deeper water, a dank, stagnant bayou, heavy with the smell of furry life, the trapper pushes aside the flags, peers out and sees what resembles a prairie-dog town on water — such a number of wattled houses that they had shut in the water as with a dam. Too many flags and willows lie over the colony for a glimpse of the telltale wriggling trail across the water; but from the wet tangle of grass and moss comes an oozy pattering.

If it were winter, the trapper could proceed as he would against a beaver colony, staking up the outlet from the swamp, trenching the ice round the different houses, breaking open the roofs and penning up any fugitives in their own bank burrows till he and his dog and a spear could clear out the gallery. But in winter there is more important work than hunting muskrat. Muskrat-trapping is for odd days before the regular hunt.

Opening the sack which he usually carries on his back, the trapper draws out three dozen small traps no larger than a rat or mouse trap. Some of these he places across the runways without any bait; for the muskrat must pass this way. Some he smears with strong-smelling pomatum. Some he baits with carrot or apple. Others he does not bait at all, simply laying them on old logs where he knows the owlets roost by day. But each of the traps — bait or no bait — he attaches to a stake driven into the water so that the prisoner will be held under when he plunges to escape till he is drowned. Otherwise, he would gnaw his foot free of the trap and disappear in a burrow.

If the marsh is large, there will be more than one muskrat colony. Having exhausted his traps on the first, the trapper lies in wait at the second. When the moon comes up over the water, there is a great splashing about the muskrat nests; for autumn is the time for house-building and the muskrats work at night. If the trapper is an eastern man, he will wade in as they do in New Jersey; but if he is a type of the western hunter, he lies on the log among the rushes, popping a shot at every head that appears in the moonlit water. His dog swims and dives for the quarry. By the time the stupid little muskrats have taken alarm and hidden, the man has twenty or thirty on the bank. Going home, he empties and resets the traps.

Thirty marten traps that yield six martens do well. Thirty muskrat traps are expected to give thirty muskrats. Add to that the twenty shot, and what does the day's work represent? Here are thirty skins of a coarse, light reddish hair, such as line the poor man's overcoat. These will sell for from 7¢ to \$7 each. They may go roughly for \$4 at the fur post. Here are ten of the deeper brown shades, with long soft fur that lines a lady's cloak. They are fine enough to pass for mink with a little dyeing, or imitation seal if they are properly plucked. These will bring from \$4 to \$7. But here are ten skins, deep, silky, almost black, for which a Russian officer will pay high prices, skins that will go to England, and from England to Paris, and from Paris to St. Petersburg with accelerating cost mark till the Russian grandee is paying \$10 or more for each pelt. Then this idle fellow's day has totalled up a big bag, not a bad day's work, considering he did not go to the university for ten years to learn his craft, did not know what wear and tear and drive meant as he worked, did not spend more than a few cents' worth of shot. But for his muskrat-pelts the man will not get \$9 in coin unless he lives very near the great fur markets. He will get powder and clothing and food and tobacco whose first cost has been increased a hundredfold by ship rates and railroad rates, by keel-boat freight and pack-horse expenses and *portage*

charges past countless rapids. But he will get all that he needs, all that he wants, all that his labor is worth, this "lazy vagabond" who spends half his time idling in the sun. Of how many other men can that be said?

But what of the ruthless slaughter among the little muskrats? Does humanity not revolt at the thought? Is this trapping not after all brutal butchery?

Animal kindness — if such a thing exists among muskrats — could hardly protest against the slaughter, seeing the muskrats themselves wage as ruthless a war against water-worm and owlet as man wages against muskrats. It is the old question, should animal life be sacrificed to preserve human life? To that question there is only one answer. Linings for coats are more important life-savers than all the humane societies of the world put together. It is probable that the first thing the prehistoric man did to preserve his own life when he realized himself was to slay some destructive animal and appropriate its coat.

II

Sikak the Skunk

Sikak the skunk it is who supplies the best imitations of sable. The hunter may follow the little four-abreast galloping footprints that lead to a hole among stones or to rotten logs, but long before he has reached the nesting-place of his quarry comes a stench against which white blood is powerless. Or the trapper may find an unexpected visitor in one of the pens which he has dug for other animals — a little black creature the shape of a squirrel and the size of a cat with white stripings down his back and a bushy tail. It is then a case of a quick deadly shot, or the man will be put to rout by an odor that will pollute the air for miles around and drive him off that section of the hunting-field. The cuttle-fish is the only other creature that possesses as powerful means of defence of a

similar nature, one drop of the inky fluid which it throws out to hide it from pursuers burning the fisherman's eyes like scalding acid. As far as white trappers are concerned, sikak is only taken by the chance shots of idle days. Yet the Indian hunts the skunk apparently utterly oblivious of the smell. Traps, poison, deadfalls, pens are the Indian weapons against the skunk; and a Cree will deliberately skin and stretch a pelt in an atmosphere that is blue with what is poison to the white man.

A story is told of three trappers hunting the skunk on the North Saskatchewan. One was an Englishman who had been long in the service of the Hudson's Bay Company and knew all the animals of the north. The second was the guide, a French-Canadian, and the third a Sandy, fresh "frae oot the land o' heather." The men were wakened one night by the noise of some animal scrambling through the window into their cabin and rummaging in the dark among the provisions. The Frenchman sprang for a light and Sandy got hold of his gun.

"Losh, mon, it's a wee bit beastie a' strip't black and white wi' a tail like a so'dier's cockade!"

That information brought the Englishman to his feet howling, "Don't shoot it! Don't shoot it! Leave that thing alone, I tell you!"

But Sandy being a true son of Scotia with a Presbyterian love of argument wished to debate the question.

"An' what for wu'd a leave it eating a' the oatmeal? I'll no leave it rampagin' th' eatables—I wull be pokin' it oot!—shoo!—shoo!"

At that the Frenchman flung down the light and bolted for the door, followed by the English trader cursing between set teeth that before "that blundering blockhead had argued the matter" something would happen.

Something did happen.

Sandy came through the door with such precipitate haste that the topmost beam brought his head a mighty thwack, roaring out

at the top of his voice that the deil was after him for a' the sins that iver he had committed since he was born.

III

Wenusk the Badger

Badger, too, is one of the furs taken by the trapper on idle days. East of St. Paul and Winnipeg, the fur was formerly unknown, or if known, so badly prepared that it is scarcely recognizable for badger. This is probably owing to differences in climate. Badger in its perfect state is a long soft fur, resembling wood marten, with deep over hairs almost the length of one's hand and as dark as marten, with under hairs as thick and soft and yielding as swan's-down, shading in color from fawn to grayish white. East of the Mississippi, there is too much damp in the atmosphere for such a long soft fur. Consequently specimens of badger seen in the East must either be sheared of the long over hairs or left to mat and tangle on the first rainy day. In New York, Quebec, Montreal, and Toronto — places where the finest furs should be on sale if anywhere — I have again and again asked for badger, only to be shown a dull, matted, short, fawnish fur not much superior to cheap dyed furs. Only of late years has demand for badger grown in the East. In the North-west the most common mist during the winter is a frost mist that is more a snow than a rain, so there is little injury to furs from moisture. Here the badger is prime, long, thick and silky, almost as attractive as ermine if only it were enhanced by as high a price. Whether badger will ever grow in favor like muskrat or 'coon, and play an important part in the returns of the fur exporters, is doubtful. The world takes its fashions from European capitals; and European capitals are too damp for badger to be in fashion with them. Certainly, with the private dealers of the North and West, badger is yearly becoming more important.

Like the muskrat, badger is prime in the autumn. Wherever the hunting-grounds of the animals are, there will the hunting-

grounds of the trapper be. Badgers run most where gophers sit sunning themselves on the clay mounds, ready to bolt down to their subterranean burrows on the first approach of an enemy. Eternal enemies these two are, gopher and badger, though they both live in ground holes, nest their lairs with grasses, run all summer and sleep all winter, and alike prey on the creatures smaller than themselves — mice, moles and birds. The gopher, or ground squirrel, is smaller than the wood squirrel, while the badger is larger than a Manx cat, with a shape that varies according to the exigencies of the situation. Normally, he is a flattish, fawn-colored beast, with a turtle-shaped body, little round head, and small legs with unusually strong claws. Ride after the badger across the prairie and he stretches out in long, lithe shape, resembling a baby cougar, turning at every pace or two to snap at your horse, then off again at a hulking scramble of astonishing speed. Pour water down his burrow to compel him to come up or down, and he swells out his body, completely filling the passage, so that his head, which is downward, is in dry air, while his hind quarters alone are in the water. In captivity the badger is a business-like little body, with very sharp teeth, of which his keeper must beware, and some of the tricks of the skunk, but inclined, on the whole, to mind his affairs if you will mind yours. Once a day regularly every afternoon out of his lair he emerges for the most comical sorts of athletic exercises. Hour after hour he will trot diagonally — because that gives him the longest run — from corner to corner of his pen, rearing up on his hind legs as he reaches one corner, rubbing the back of his head, then down again and across to the other corner, where he repeats the performance. There can be no reason for the badger doing this, unless it was his habit in the wilds when he trotted about leaving dumb signs on mud banks and brushwood by which others of his kind might know where to find him at stated times.

Sunset is the time when he is almost sure to be among the gopher burrows. In vain the saucy jay shrieks out a warning to

the gophers. Of all the prairie creatures, they are the stupidest, the most beset with curiosity to know what that jay's shriek may mean. Sunning themselves in the last rays of daylight, the gophers perch on their hind legs to wait developments of what the jay announced. But the badger's fur and the gopher mounds are almost the same color. He has pounced on some playful youngsters before the rest see him. Then there is a wild scuttling down to the depths of the burrows. That, too, is vain; for the badger begins ripping up the clay bank like a grizzly, down — down — in pursuit, two, three, five feet, even twelve.

Then is seen one of the most curious freaks in all the animal life of the prairie. The underground galleries of the gophers connect and lead up to different exits. As the furious badger comes closer and closer on the cowering gophers, the little cowards lose heart, dart up the galleries to open doors, and try to escape through the grass of the prairie. But no sooner is the badger hard at work than a gray form seems to rise out of the earth, a coyote who had been slinking to the rear all the while; and as the terrified gophers scurry here, scurry there, coyote's white teeth snap! — snap! He is here — there — everywhere — pouncing — jumping — having the fun of his life, gobbling gophers as cats catch mice. Down in the bottom of the burrow, the badger may get half a dozen poor cooped huddling prisoners; but the coyote up on the prairie has devoured a whole colony.

Do these two, badger and coyote, consciously hunt together? Some old trappers vow they do — others just as vehemently that they don't. The fact remains that wherever the badger goes gopher-hunting on an unsettled prairie, there the coyote skulks, reaping reward of all the badger's work. The coincidence is no stranger than the well-known fact that sword-fish and thrasher — two different fish — always league together to attack the whale.

One thing only can save the gopher colony, and that is the gun barrel across yon earth mound where a trapper lies in wait for the coming of the badger.

IV

The 'Coon

Sir Alexander MacKenzie reported that in 1798 the Northwest Company sent out only 100 raccoon from the fur country. To-day, raccoon is a fur in growing demand. What brought about the change? Simply an appreciation of the qualities of 'coon, which combines the greatest warmth with the lightest weight and is especially adapted for a cold climate and constant wear. What was said of badger applies with greater force to 'coon. The 'coon in the East is associated in one's mind with cabbies, in the West with fashionably dressed men and women. And there is just as wide a difference in the quality of the fur as in the quality of the people. The cabbies' 'coon coat is a rough yellow fur with red stripes. The Westerner's 'coon is a silky brown fur with black stripes. One represents the fall hunt of men and boys round hollow logs, the other the midwinter hunt of a professional trapper in the Far North. A dog usually bays the 'coon out of hiding in the East. Tiny tracks, like a child's hand, tell the Northern hunter where to set his traps.

Wahboos the rabbit, musquash the muskrat, sikak the skunk, wenusk the badger, and the common 'coon — these are the little chaps whose hunt fills the idle days of the trapper's busy life. At night, before the rough stone hearth which he has built in his cabin, he is still busy by firelight preparing their pelts. Each skin must be stretched and cured. Turning the skin fur side in, the trapper pushes into the pelt a wedge-shaped slab of spliced cedar. Into the splice he shoves another wedge of wood which he hammers in, each blow widening the space and stretching the skin. All pelts are stretched fur in but the fox. Tacking the stretched skin on a flat board, the trapper hangs it to dry till he carries all to the fort; unless, indeed, he should need a garment for himself — cap, coat or gauntlets — in which case he takes out a square needle and passes his evenings like a tailor, sewing.

CHAPTER IX

THE RARE FURS — HOW THE TRAPPER TAKES SAKWASEW THE MINK, NEKIK THE OTTER, WUCHAK THE FISHER, AND WAPIS-TAN THE MARTEN.

I

Sakwasew the Mink

THERE are other little chaps with more valuable fur than musquash, whose skin seldom attains higher honour than inside linings, and wahboos, whose snowy coat is put to the indignity of imitating ermine with a dotting of black cat for the ermine's jet tip. There are mink and otter and fisher and fox and ermine and sable, all little fellows with pelts worth their weight in coin of the realm.

On one of those idle days when the trapper seems to be doing nothing but lying on his back in the sun, he has witnessed a curious, but common, battle in pantomime between bird and beast. A prairie-hawk circles and drops, lifts and wheels again with monotonous silent persistence above the swamp. What quarry does he seek, this lawless forager of the upper air still hunting a hidden nook of the low prairie? If he were out purely for exercise, like the little badger when it goes rubbing the back of its head from post to post, there would be a buzzing of wings and shrill lonely callings to an unseen mate.

But the circling hawk is as silent as the very personification of death. Apparently he can't make up his mind for the death-drop on some rat or frog down there in the swamp. The trapper notices that the hawk keeps circling directly above the place where the waters of the swamp tumble from the ravine in a small cataract

to join a lower river. He knows, too, from the rich orange of the plumage that the hawk is young. An older fellow would not be advertising his intentions in this fashion. Besides, an older hawk would have russet-gray feathering. Is the rascally young hawk meditating a clutch of talons round some of the unsuspecting trout that usually frequent the quiet pools below a waterfall? Or does he aim at bigger game? A young hawk is bold with the courage that has not yet learned the wisdom of caution. That is why there are so many more of the brilliant young red hawks in our museums than old grizzled gray veterans whose craft circumvents the specimen hunter's cunning. Now the trapper comes to have as keen a sense of *feel* for all the creatures of the wilds as the creatures of the wilds have for man; so he shifts his position that he may find what is attracting the hawk.

Down on the pebbled beach below the waterfall lies an auburn bundle of fur, about the size of a very long, slim, short-legged cat, still as a stone — some member of the weasel family gorged torpid with fish, stretched out full length to sleep in the sun. To sleep, ah, yes, and as the Danish prince said, "perchance to dream"; for all the little fellows of river and prairie take good care never to sleep where they are exposed to their countless enemies. This sleep of the weasel arouses the man's suspicion. The trapper draws out his field-glass. The sleeper is a mink, and its sleep is a sham, with beady, red eyes blinking a deal too lively for real death. Why does it lie on its back rigid and straight as if it were dead, with all four tiny paws clutched out stiff? The trapper scans the surface of the swamp to see if some foolish muskrat is swimming dangerously near the sleeping mink.

Presently the hawk circles lower — lower! — Drops straight as a stone! Its talons are almost in the mink's body, when of a sudden the sleeper awakens — awakens — with a leap of the four stiff little feet and a darting spear-thrust of snapping teeth deep in the neck of the hawk! At first the hawk rises, tearing furiously at the clinging mink with its claws. The wings sag. Down bird and

beast fall. Over they roll on the sandy beach, hawk and mink, over and over with a thrashing of the hawk's wings to beat the treacherous little vampire off. Now the blood-sucker is on top clutching — clutching! Now the bird flounders up, craning his neck from the death-grip. Then the hawk falls on his back. His wings are prone. They cease to flutter.

Running to the bank the trapper is surprised to see the little blood-sucker making off with the prey instead of deserting it as all creatures akin to the weasel family usually do. That means a family of mink somewhere near, to be given their first lesson in bird-hunting, in mink-hawking, by the body of this poor, dead, foolish gyrfalcon.

By a red mark here, by a feather there, crushed grass as of something dragged, a little webbed footprint on the wet clay, a tiny marking of double dots where the feet have crossed a dry stone, the trapper slowly takes up the trail of the mink. Mink are not prime till the late fall. Then the reddish fur assumes the shades of the russet grasses where they run until the white of winter covers the land. Then — as if nature were to exact avengement for all the red slaughter the mink has wrought during the rest of the year — his coat becomes dark brown, almost black, the very shade that renders him most conspicuous above snow to all the enemies of the mink world. But while the trapper has no intention of destroying what would be worthless now but will be valuable in the winter, it is not every day that even a trapper has a chance to trail a mink back to its nest and see the young family.

But suddenly the trail stops. Here is a sandy patch with some tumbled stones under a tangle of grasses and a rivulet not a foot away. Ah — there it is — a nest or lair, a tiny hole almost hidden by the rushes! But the nest seems empty. Fast as the trapper has come, the mink came faster and hid her family. To one side, the hawk had been dropped among the rushes. The man pokes a stick in the lair but finds nothing. Putting in his hand, he is dragging out bones, feathers, skeleton muskrats, putrid frogs,

promiscuous remnants of other quarries brought to the burrow by the mink, when a little cattish *s-p-i-t!* almost touches his hand. His palm closes over something warm, squirming, smaller than a kitten, with very downy fur on a soft, mouse-like skin, eyes that are still blind and a tiny mouth that neither meows nor squeaks, just *spits!* — *spits!* — *spits!* — in impotent, viperish fury. All the other minklets the mother had succeeded in hiding under the grasses, but somehow this one had been left. Will he take it home and try the experiment of rearing a young mink with a family of kittens?

The trapper calls to mind other experiments. There was the little beaver that chewed up his canoe and gnawed a hole of escape through the door. There were the three little bob-cats left in the woods behind his cabin last year when he refrained from setting out traps and tied up his dog to see if he could not catch the whole family, mother and kittens, for an Eastern museum. Furtively at first, the mother had come to feed her kittens. Then the man had put out rugs to keep the kittens warm and lain in wait for the mother; but no sooner did she see her offspring comfortably cared for, than she deserted them entirely, evidently acting on the proverb that the most gracious enemy is the most dangerous, or else deciding that the kits were so well off that she was not needed. Adopting the three little wild-cats, the trapper had reared them past blind-eyes, past colic and dumps and all the youthful ills to which live kittens are heirs, when trouble began. The longing for the wilds came. Even catnip green and senna tea boiled can't cure that. So keenly did the gipsy longing come to one little bob that he perished escaping to the woods by way of the chimney flue. The second little bob succeeded in escaping through a parchment stop-gap that served the trapper as a window. And the third bobby dealt such an ill-tempered gash to the dog's nose that the combat ended in instant death for the cat.

Thinking over these experiments, the trapper wisely puts the mink back in the nest with words which it would have been well for

that little ball of down to have understood. He told it he would come back for it next winter and to be sure to have its best black coat on. For the little first-year minks wear dark coats, almost as fine as Russian sable. Yes — he reflects, poking it back to the hole and retreating quickly so that the mother will return — better leave it till the winter; for wasn't it Koot who put a mink among his kittens, only to have the little viper set on them with tooth and claw as soon as its eyes opened? Also mink are bad neighbors to a poultry-yard. Forty chickens in a single night will the mink destroy, not for food but — to quote man's words — for the zest of the sport. The mink, you must remember, like other pot-hunters, can boast of a big bag.

The trapper did come back next fall. It was when he was ranging all the swamp-lands for beaver-dams. Swamp lands often mean beaver-dams; and trappers always note what stops the current of a sluggish stream. Frequently it is a beaver colony built across a valley in the mountains, or stopping up the outlet of a slough. The trapper was sleeping under his canoe on the banks of the river where the swamp tumbled out from the ravine. Before retiring to what was a boat by day and a bed by night, he had set out a fish net and some loose lines — which the flow of the current would keep in motion — below the waterfall. Carelessly, next day, he threw the fish-heads among the stones. The second morning he found such a multitude of little tracks dotting the rime of the hoar frost that he erected a tent back from the waterfall, and decided to stay trapping there till the winter. The fish-heads were no longer thrown away. They were left among the stones in small steel-traps weighted with other stones, or attached to a loose stick that would impede flight. And if the poor gyrfalcon could have seen the mink held by the jaws of a steel-trap, hissing, snarling, breaking its teeth on the iron, spitting out all the rage of its wicked nature, the bird would have been avenged.

And as winter deepened, the quality of minks taken from the traps became darker, silkier, crisper, almost brown black in some

of the young, but for light fur on the under lip. The Indians say that sakwasew the mink would sell his family for a fish, and as long as fish lay among the stones, the trapper gathered his harvest of fur: reddish mink that would be made into little neck ruffs and collar pieces, reddish brown mink that would be sewed into costly coats and cloaks, rare brownish black mink that would be put into the beautiful flat scarf collars almost as costly as a full coat. And so the mink-hunt went on merrily for the man till the midwinter lull came at Christmas. For that year the mink-hunt was over.

II

Nekik the Otter

Sakwasew was not the only fisher at the pool below the falls. On one of those idle days when the trapper sat lazily by the river side, a round head slightly sunburned from black to russet had bobbed up to the surface of the water, peered sharply at the man sitting so still, paddled little flipper-like feet about, then ducked down again. Motionless as the mossed log under him sits the man; and in a moment up comes the little black head again, round as a golf ball, about the size of a very large cat, followed by three other little bobbing heads — a mother otter teaching her babies to dive and swim and duck from the river surface to the burrows below the water along the river bank. Perhaps the trapper has found a dead fish along this very bank with only the choice portions of the body eaten — a sure sign that nekik the otter, the little epicure of the water world, has been fishing at this river.

With a scarcely perceptible motion, the man turns his head to watch the swimmers. Instantly, down they plunge, mother and babies, to come to the surface again higher up-stream, evidently working up-current like the beaver in spring for a glorious frolic in the cold clear waters of the upper sources. At one place on the sandy beach they all wade ashore. The man utters a slight "Hiss!" Away they scamper, the foolish youngsters, landward instead of

to the safe water as the hesitating mother would have them do, all the little feet scrambling over the sand with the funny short steps of a Chinese lady in tight boots. Maternal care proves stronger than fear. The frightened mother follows the young otter and will no doubt read them a sound lecture on land dangers when she has rounded them back to the safe water higher up stream.

Of all wild creatures, none is so crafty in concealing its lairs as the otter. Where did this family come from? They had not been swimming up-stream; for the man had been watching on the river bank long before they appeared on the surface. Stripping, the trapper dives in mid-stream, then half wades, half swims along the steepest bank, running his arm against the clay cliff to find a burrow. On land he could not do this at the lair of the otter; for the smell of the man-touch would be left on his trail, and the otter, keener of scent and fear than the mink, would take alarm. But for the same reason that the river is the safest refuge for the otter, it is the surest hunting for the man — water does not keep the scent of a trail. So the man runs his arm along the bank. The river is the surest hunting for the man, but not the safest. If an old male were in the bank burrow now, or happened to be emerging from grass-lined subterranean air chambers above the bank gallery, it might be serious enough for the exploring trapper. One bite of nekik the otter has crippled many an Indian. Knowing from the remnants of half-eaten fish and from the holes in the bank that he has found an otter runway, the man goes home as well satisfied as if he had done a good day's work.

And so that winter when he had camped below the swamp for the mink-hunt, the trapper was not surprised one morning to find a half-eaten fish on the river bank. Sakwasew the mink takes good care to leave no remnants of his greedy meal. What he cannot eat he caches. Even if he has strangled a dozen water-rats in one hunt, they will be dragged in a heap and covered. The half-eaten fish left exposed is not mink's work. Otter has been here and otter will come back; for as the frost hardens, only those pools below

the falls keep free from ice. No use setting traps with fish-heads as long as fresh fish are to be had for the taking. Besides, the man has done nothing to conceal his tracks; and each morning the half-eaten fish lie farther off the line of the man-trail.

By and by the man notices that no more half-eaten fish are on his side of the river. Little tracks of webbed feet furrowing a deep rut in the soft snow of the frozen river tell that nekik has taken alarm and is fishing from the other side. And when Christmas comes with a dwindling of the mink-hunt, the man, too, crosses to the other side. Here he finds that the otter tracks have worn a path that is almost a toboggan slide down the crusted snow bank to the iced edge of the pool. By this time nekik's pelt is prime, almost black, and as glossy as floss. By this time, too, the fish are scarce and the epicure has become ravenous as a pauper. One night when the trapper was reconnoitring the fish hole, he had approached the snow bank so noiselessly that he came on a whole colony of otters without their knowledge of his presence. Down the snow bank they tumbled, head-first, tail-first, slithering through the snow with their little paws braced, rolling down on their backs like lads upset from a toboggan, otter after otter till the man learned that the little beasts were not fishing at all, but coasting the snow bank like youngsters on a night frolic. No sooner did one reach the bottom than up he scampered to repeat the fun; and sometimes two or three went down in a rolling bunch mixed up at the foot of a slide as badly as a couple of toboggans that were unpremeditatedly changing their occupants. Bears wrestle. The kittens of all the cat tribe play hide and seek. Little badger finds it fun to run round rubbing the back of his head on things; and here was nekik the otter at the favorite amusement of his kind — coasting down a snow bank.

If the trapper were an Indian, he would lie in wait at the landing-place and spear the otter as they came from the water. But the white man's craft is deeper. He does not wish to frighten the otter till the last has been taken. Coming to the slide by day, he baits

a steel-trap with fishes and buries it in the snow just where the otter will be coming down the hill or up from the pool. Perhaps he places a dozen such traps around the hole with nothing visible but the frozen fish lying on the surface. If he sets his traps during a snow-fall, so much the better. His own tracks will be obliterated and the otter's nose will discover the fish. Then he takes a bag filled with some substance of animal odor, pomatum, fresh meat, pork, or he may use the flesh side of a fresh deer-hide. This he drags over the snow where he has stepped. He may even use a fresh hide to handle the traps, as a waiter uses a serviette to pass plates. There must be no man-smell, no man-track near the otter traps.

While the mink-hunt is fairly over by midwinter, otter-trapping lasts from October to May. The value of all rare furs, mink, otter, marten, ermine, varies with two things: (1) the latitude of the hunting-field; (2) the season of the hunt. For instance, ask a trapper of Minnesota or Lake Superior what he thinks of the ermine, and he will tell you that it is a miserable sort of weasel of a dirty brown not worth twenty-five cents a skin. Ask a trapper of the North Saskatchewan what he thinks of ermine; and he will tell you it is a pretty little whitish creature good for fur if trapped late enough in the winter and always useful as a *lining*. But ask a trapper of the Arctic about the ermine, and he describes it as the finest fur that is taken except the silver fox, white and soft as swan's-down, with a tail-tip like black onyx. This difference in the fur of the animal explains the wide variety of prices paid. Ermine not worth twenty-five cents in Wisconsin might be worth ten times as much on the Saskatchewan.

So it is with the otter. All trapped between latitude thirty-five and sixty is good fur; and the best is that taken toward the end of winter when scarcely a russet hair should be found in the long over-fur of nekik's coat.

III

Wuchak the Fisher, or Pekan

Wherever the waste of fish or deer is thrown, there will be found lines of double tracks not so large as the wild-cat's, not so small as the otter's, and without the same webbing as the mink's. This is wuchak the fisher, or pekan, commonly called "the black cat" — who, in spite of his fishy name, hates water as cats hate it. And the tracks are double because pekan travel in pairs. He is found along the banks of streams because he preys on fish and fisher, on mink and otter and muskrat, on frogs and birds and creatures that come to drink. He is, after all, a very greedy fellow, not at all particular about his diet, and like all gluttons, easily snared. While mink and otter are about, the trapper will waste no steel-traps on pekan. A deadfall will act just as effectively; but there is one point requiring care. Pekan has a sharp nose. It is his nose that brings him to all carrion just as surely as hawks come to pick dead bones. But that same nose will tell him of man's presence. So when the trapper has built his pen of logs so that the front log or deadfall will crush down on the back of an intruder tugging at the bait inside, he overlays all with leaves and brush to quiet the pekan's suspicions. Besides, the pekan has many tricks akin to the wolverine. He is an inveterate thief. There is a well-known instance of Hudson's Bay trappers having a line of one hundred and fifty marten traps stretching for fifty miles robbed of their bait by pekan. The men shortened the line to thirty miles and for six times in succession did pekan destroy the traps. Then the men set themselves to trap the robber. He will rifle a deadfall from the slanting back roof where there is no danger; so the trapper overlays the back with heavy brush.

Pekan are hard to trap; but they are always at run where the trapper is hunting the rare furs, and for that reason are usually snared at the same time as mink and otter.

IV

Wapistan the Marten

When Koot went blind on his way home from the rabbit-hunt, he had intended to set out for the pine woods. Though blizzards still howl over the prairie, by March the warm sun of midday has set the sap of the forests stirring and all the woodland life awakens from its long winter sleep. Cougar and lynx and bear rove through the forests, ravenous with spring hunger. Otter, too, may be found where the ice mounds of a waterfall are beginning to thaw. But it is not any of these that the trapper seeks. If they cross his path, good — they, too, will swell his account at the fur post. It is another of the little chaps that he seeks, a little, long, low-set animal whose fur is now glistening bright on the deep dark overhairs, soft as down in the thick fawn underhairs, wapistan the marten.

When the forest begins to stir with the coming of spring, wapistan stirs too, crawling out from the hollow of some rotten pine log, restless with the same blood-thirst that set the little mink playing his tricks on the hawk. And yet the marten is not such a little viper as the mink. Wapistan will eat leaves and nuts and roots if he can get vegetable food, but failing these, that ravenous spring hunger of his must be appeased with something else. And out he goes from his log hole hunger-bold as the biggest of all other spring ravagers. That boldness gives the trapper his chance at the very time when wapistan's fur is best. All winter the trapper may have taken marten; but the end of winter is the time when wapistan wanders freely from cover. Thus the trapper's calendar would have months of muskrat first, then beaver and mink and pekan and bear and fox and ermine and rabbit and lynx and marten, with a long idle midsummer space when he goes to the fort for the year's provisions and gathers the lore of his craft.

Wapistan is not hard to track. Being much longer and heavier than a cat, with very short legs and small feet, his body almost drags the ground and his tracks sink deep, clear, and sharp. His

feet are smaller than otter's and mink's, but easily distinguishable from those two fishers. The water animal leaves a spreading footprint, the mark of the webbed toes without any fur on the padding of the toe-balls. The land animal of the same size has clear cut, narrower, heavier marks. By March, these dotting foot-tracks thread the snow everywhere.

Coming on marten tracks at a pine log, the trapper sends in his dog or prods with a stick. Finding nothing, he baits a steel-trap with pomatum, covers it deftly with snow, drags the decoy skin about to conceal his own tracks, and goes away in the hope that the marten will come back to this log to guzzle on his prey and sleep.

If the track is much frequented, or the forest overrun with marten tracks, the trapper builds deadfalls, many of them running from tree to tree for miles through the forest in a circle whose circuit brings him back to his cabin. Remnants of these log traps may be seen through all parts of the Rocky Mountain forests. Thirty to forty traps are considered a day's work for one man, six or ten marten all that he expects to take in one season; but when marten are plentiful, the unused traps of to-day may bring prize to-morrow.

The Indian trapper would use still another kind of trap. Where the tracks are plainly frequently used runways to watering-places or lair in hollow tree, the Indian digs a pit across the marten's trail. On this he spreads brush in such roof fashion that though the marten is a good climber, if once he falls in, it is almost impossible for him to scramble out. If a poor cackling grouse or "fool-hen" be thrust into the pit, the Indian is almost sure to find a prisoner. This seems to the white man a barbarous kind of trapping; but the poor "fool-hen," hunted by all the creatures of the forest, never seems to learn wisdom, but invites disaster by popping out of the brush to stare at every living thing that passes. If she did not fall a victim in the pit, she certainly would to her own curiosity above ground. To the steel-trap the hunter attaches a piece of log to entangle the prisoner's flight as he rushes through the underbrush. Once caught

in the steel jaws, little wapistan must wait — wait for what? For the same thing that comes to the poor “fool-hen” when wapistan goes crashing through the brush after her; for the same thing that comes to the baby squirrels when wapistan climbs a tree to rob the squirrel’s nest, eat the young, and live in the rifled house; for the same thing that comes to the hoary marmot whistling his spring tune just outside his rocky den when wapistan, who has climbed up, pounces down from above. Little death-dealer he has been all his life; and now death comes to him for a nobler cause than the stuffing of a greedy maw — for the clothing of a creature nobler than himself — man.

The otter can protect himself by diving, even diving under snow. The mink has craft to hide himself under leaves so that the sharpest eyes cannot detect him. Both mink and otter furs have very little of that animal smell which enables the foragers to follow their trail. What gift has wapistan, the marten, to protect himself against all the powers that prey? His strength and his wisdom lie in the little stubby feet. These can climb.

A trapper’s dog had stumbled on a marten in a stump hole. A snap of the marten’s teeth sent the dog back with a jump. Wapistan will hang on to the nose of a dog to the death; and trappers’ dogs grow cautious. Before the dog gathered courage to make another rush, the marten escaped by a rear knot-hole, getting the start of his enemy by fifty yards. Off they raced, the dog spending himself in fury, the marten keeping under the thorny brush where his enemy could not follow, then across open snow where the dog gained, then into the pine woods where the trail ended on the snow. Where had the fugitive gone? When the man came up, he first searched for log holes. There were none. Then he lifted some of the rocks. There was no trace of wapistan. But the dog kept baying a special tree, a blasted trunk, bare as a mast pole and seemingly impossible for any animal but a squirrel to climb. Knowing the trick by which creatures like the bob-cat can flatten their body into a resemblance of a tree trunk, the trapper searched care-

fully all round the bare trunk. It was not till many months afterward when a wind storm had broken the tree that he discovered the upper part had been hollow. Into this eerie nook the pursued marten had scrambled and waited in safety till dog and man retired.

In one of his traps the man finds a peculiarly short specimen of the marten. In the vernacular of the craft this marten's bushy tail will not reach as far back as his hind legs can stretch. Widely different from the mink's scarcely visible ears, this fellow's ears are sharply upright, keenly alert. He is like a fox, where the mink resembles a furred serpent. Marten moves, springs, jumps like an animal. Mink glides like a snake. Marten has the strong neck of an animal fighter. Mink has the long, thin, twisting neck which reptiles need to give them striking power for their fangs. Mink's under lip has a mere rim of white or yellow. Marten's breast is patched sulphur. But this short marten with a tail shorter than other marten differs from his kind as to fur. Both mink and marten fur are reddish brown; but this short marten's fur is almost black, of great depth, of great thickness, and of three qualities: (1) There are the long dark overhairs the same as the ordinary marten, only darker, thicker, deeper; (2) there is the soft under fur of the ordinary marten, usually fawn, in this fellow deep brown; (3) there is the skin fur resembling chicken-down, of which this little marten has such a wealth — to use a technical expression — you cannot find his scalp. Without going into the old quarrel about species, when a marten has these peculiarities, he is known to the trapper as sable.

Whether he is the American counterpart to the Russia sable is a disputed point. Whether his superior qualities are owing to age, climate, species, it is enough for the trapper to know that short, dark marten yields the trade — sable.

CHAPTER X

UNDER THE NORTH STAR — WHERE FOX AND ERMINE RUN

I

Of Foxes, Many and Various — Red, Cross, Silver, Black, Prairie, Kit or Swift, Arctic, Blue, and Gray

WHEREVER grouse and rabbit abound, there will foxes run and there will the hunter set steel-traps. But however beautiful a fox-skin may be as a specimen, it has value as a fur only when it belongs to one of three varieties — Arctic, black, and silver. Other foxes — red, cross, prairie, swift, and gray — the trapper will take when they cross his path and sell them in the gross at the fur post, as he used to barter buffalo-hides. But the hunter who traps the fox for its own sake, and not as an uncalculated extra to the mink-hunt or the beaver total, must go to the Far North, to the land of winter night and midnight sun, to obtain the best fox-skins.

It matters not to the trapper that the little kit fox or swift at run among the hills between the Missouri and Saskatchewan is the most shapely of all the fox kind, with as finely pointed a nose as a spitz dog, ears alert as a terrier's, and a brush, more like a lady's gray feather boa than fur, curled round his dainty toes. Little kit's fur is a grizzled gray shading to mottled fawn. The hairs are coarse, horsey, indistinctly marked, and the fur is of small value to the trader; so dainty little swift, who looks as if nature made him for a pet dog instead of a fox, is slighted by the hunter, unless kit persists in tempting a trap. Rufus the red fellow, with his grizzled gray head and black ears and whitish throat and flaunting

purplish tinges down his sides like a prince royal, may make a handsome fur which has lately become a craze. His cousin with the black fore feet, the prairie fox, who is the largest and strongest and scientifically finest of all his kind, has more value as a fur. The color of the prairie fox shades rather to pale ochre and yellow than the nondescript grizzled gray that is of so little value as a fur. Of the silver-gray fox little need be said. He lives too far south — California and Texas and Mexico — to acquire either energy or gloss. He is the one indolent member of the fox tribe, and his fur lacks the sheen that only winter cold can give. The value of the cross fox depends on the markings that give him his name. If the bands, running diagonally over his shoulders in the shape of a cross, shade to grayish blue he is a prize, if to reddish russet he is only a curiosity to be dyed.

The Arctic and black and silver foxes have the pelts that at their worst equal the other rare furs, at their best exceed the value of all other furs by so much that the lucky trapper who takes a silver fox has made his fortune. These, then, are the foxes that the trapper seeks and these are to be found only on the white wastes of the polar zone.

That brings up the question — what is a silver fox? Strange as it may seem, neither scientist nor hunter can answer the question. Nor will study of all the park specimens in the world tell the secret, for the simple reason that only an Arctic climate can produce a silver fox; and parks are not established in the Arctics yet. It is quite plain that the prairie fox is in a class by himself. The uniformity of his size, his strength, his habits, his appearance, distinguish him from other foxes. It is quite plain that the little kit fox or swift is of a kind distinct from other foxes. His smallness, the shape of his bones, the cast of his face, the trick of sitting rather than lying, that wonderful big bushy soft tail of which a peacock might be vain — all differentiate him from other foxes. The same may be said of the Arctic fox with a pelt that is more like white wool than hairs of fur. He is much smaller than the red. His tail is bushier and larger than the swift, and

like all Arctic creatures, he has the soles of his feet heavily furred. All this is plain and simple classification. But how about Mr. Blue Fox of the same size and habit as the white Arctic? Is he the Arctic fox in summer clothing? Yes, say some trappers; and they show their pelts of an Arctic fox taken in summer of a rusty white. But no, vow other trappers — that is impossible, for here are blue fox-skins captured in the depths of midwinter with not a white hair among them. Look closely at the skins. The ears of one blue fox are long, perfect, unbitten by frost or foe — he was a young fellow; and he is blue. Here is another with ears almost worn to stubs by fights and many winters' frosts — he is an old fellow; and he, too, is blue. Well, then, the blue fox may sometimes be the white Arctic fox in summer dress; but the blue fox who is blue all the year round, varying only in the shades of blue with the seasons, is certainly not the white Arctic fox.

The same difficulty besets distinction of silver fox from black. The old scientists classified these as one and the same creature. Trappers know better. So do the later scientists who almost agree with the unlearned trapper's verdict — there are as many species as there are foxes. Black fox is at its best in midwinter, deep, brilliantly glossy, soft as floss, and yet almost impenetrable — the very type of perfection of its kind. But with the coming of the tardy Arctic spring comes a change. The snows are barely melted in May when the sheen leaves the fur. By June, the black hairs are streaked with gray; and the black fox is a gray fox. Is it at some period of the transition that the black fox becomes a silver fox, with the gray hairs as sheeny as the black and each gray hair delicately tipped with black? That question, too, remains unanswered; for certainly the black fox trapped when in his gray summer coat is not the splendid silver fox of priceless value. Black fox turning to a dull gray of midsummer may not be silver fox; but what about gray fox turning to the beautiful glossy black of midwinter? Is that what makes silver fox? Is silver fox simply a fine specimen of black caught at the very period when he is blooming

into his greatest beauty? The distinctive difference between gray fox and silver is that gray fox has gray hairs among hairs of other color, while silver fox has silver hair tipped with glossiest black on a foundation of downy gray black.

Even greater confusion surrounds the origin of cross and red and gray. Trappers find all these different cubs in one burrow; but as the cubs grow, those pronounced cross turn out to be red, or the red becomes cross; and what they become at maturity, that they remain, varying only with the seasons.¹ It takes many centuries to make one perfect rose. Is it the same with the silver fox? Is he a freak or a climax or the regular product of yearly climatic changes caught in the nick of time by some lucky trapper? Ask the scientist that question, and he theorizes. Ask the trapper, and he tells you if he could only catch enough silver foxes to study that question, he would quit trapping. In all the maze of ignorance and speculation, there is one anchored fact. While animals turn a grizzled gray with age, the fine gray coats are not caused by age. Young animals of the rarest furs — fox and ermine — are born in ashy color that turns to gray while they are still in their first nest.

To say that silver fox is costly solely because it is rare is sheerest nonsense. It would be just as sensible to say that labradorite, which is rare, should be as costly as diamonds. It is the intrinsic beauty of the fur, as of the diamonds, that constitutes its first value. The facts that the taking of a silver fox is always pure luck, that the luck comes seldom, that the trapper must have travelled countless leagues by snow-shoe and dog train over the white wastes of the North, that trappers in polar regions are exposed to more dangers and hardships than elsewhere and that the fur must have been carried a long distance to market — add to the first high value of silver fox till it is not surprising that little pelts barely two feet long have sold for prices ranging from \$500 to \$2000. For the trapper the way to the fortune of a silver fox is the same as the road to fortune for all other men — by the homely trail of every-day

¹ That is, as far as trappers yet know.

work. Cheers from the fort gates bid trappers setting out for far northern fields God-speed. Long ago there would have been a firing of cannon when the northern hunters left for their distant camping-grounds; but the cannon of Churchill lie rusting to-day and the hunters who go to the sub-Arctics and the Arctics no longer set out from Churchill on the bay, but from one of the little inland MacKenzie River posts. If the fine powdery snow-drifts are glossed with the ice of unbroken sun-glare, the runners strap iron crampets to their snow-shoes, and with a great jingling of the dog-bells, barking of the huskies, and yelling of the drivers, coast away for the leagueless levels of the desolate North. Frozen river-beds are the only path followed, for the high cliffs — almost like ramparts on the lower MacKenzie — shut off the drifting east winds that heap barricades of snow in one place and at another sweep the ground so clear that the sleighs pull heavy as stone. Does a husky fag? A flourish of whips and off the laggard scampers, keeping pace with the others in the traces, a pace that is set for forty miles a day with only one feeding time, nightfall when the sleighs are piled as a wind-break and the frozen fish are doled out to the ravenous dogs. Gun signals herald the hunter's approach to a chance camp; and no matter how small and mean the tepee, the door is always open for whatever visitor, the meat pot set simmering for hungry travellers. When the snow crust cuts the dog's feet, buckskin shoes are tied on the huskies; and when an occasional dog fags entirely, he is turned adrift from the traces to die. Relentless as death is northern cold; and wherever these long mid-winter journeys are made, gruesome traditions are current of hunter and husky.

I remember hearing of one old husky that fell hopelessly lame during the north trip. Often the drivers are utter brutes to their dogs, speaking in curses which they say is the only language a husky can understand, emphasized with the blows of a club. Too often, as well, the huskies are vicious curs ready to skulk or snap or bolt or fight, anything but work. But in this case the dog was an old

reliable that kept the whole train in line, and the driver had such an affection for the veteran husky that when rheumatism crippled the dog's legs the man had not the heart to shoot such a faithful servant. The dog was turned loose from the traces and hobbled lamely behind the scampering teams. At last he fell behind altogether, but at night limped into camp whining his joy and asking dumbly for the usual fish. In the morning when the other teams set out, the old husky was powerless to follow. But he could still whine and wag his tail. He did both with all his might, so that when the departing driver looked back over his shoulder, he saw a pair of eyes pleading, a head with raised alert ears, shoulders straining to lift legs that refused to follow, and a bushy tail thwacking — thwacking — thwacking the snow!

"You ought to shoot him," advised one driver.

"You do it — you're a dead sure aim," returned the man who had owned the dog.

But the other drivers were already coasting over the white wastes. The owner looked at his sleighs as if wondering whether they would stand an additional burden. Then probably reflecting that old age is not desirable for a suffering dog in a bitingly keen frost, he turned towards the husky with his hand in his belt. Thwack — thwack went the tail as much as to say: "Of course he wouldn't desert me after I've hauled his sleigh all my life! Thwack — thwack! I'd get up and jump all around him if I could; there isn't a dog-gone husky in all polar land with half as good a master as I have!"

The man stopped. Instead of going to the dog he ran back to his sleigh, loaded his arms full of frozen fish and threw them down before the dog. Then he put one caribou-skin under the old dog, spread another over him and ran away with his train while the husky was still guzzling. The fish had been poisoned to be thrown out to the wolves that so often pursue northern dog trains.

Once a party of hunters crossing the Northern Rockies came on a dog train stark and stiff. Where was the master who had bidden

them stand while he felt his way blindly through the white whirl of a blizzard for the lost path? In the middle of the last century, one of that famous family of fur traders, a MacKenzie, left Georgetown to go north to Red River in Canada. He never went back to Georgetown and he never reached Red River; but his coat was found fluttering from a tree, a death signal to attract the first passer-by, and the body of the lost trader was discovered not far off in the snow. Unless it is the year of the rabbit pest and the rabbit ravagers are bold with hunger, the pursuing wolves seldom give full chase. They skulk far to the rear of the dog trains, licking up the stains of the bleeding feet, or hanging spectrally on the dim frosty horizon all night long. Hunger drives them on; but they seem to lack the courage to attack. I know of one case where the wolves followed the dog trains bringing out a trader's family from the North down the river-bed for nearly five hundred miles. What man hunter would follow so far?

The farther north the fox hunter goes, the shorter grow the days, till at last the sun, which has rolled down in a wheel of fire, dwindles to a disc, the disc to a rim — then no rim at all comes up, and it is midwinter night, night but not darkness. The white of endless unbroken snow, the glint of icy particles filling the air, the starlight brilliant as diamond points, the Aurora Borealis in curtains and shafts and billows of tenuous impalpable rose-colored fire — all brighten the polar night so that the sun is unmissed. This is the region chiefly hunted by the Eskimo, with a few white men and Chippewyan half-breeds. The regular Northern hunters do not go as far as the Arctics, but choose their hunting-ground somewhere in the region of "little sticks," meaning the land where timber growth is succeeded by dwarf scrubs.

The hunting-ground is chosen always from the signs written across the white page of the snow. If there are claw-marks, bird signs of northern grouse or white ptarmigan or snow-bunting, ermine will be plentiful; for the northern birds with their clogged stockings of feet feathers have a habit of floundering under the

powdery snow; and up through that powdery snow darts the snaky neck of stoat, the white weasel-hunter of birds. If there are the deep plunges of the white hare, lynx and fox and mink and marten and pekan will be plentiful; for the poor white hare feeds all the creatures of the northern wastes, man and beast. If there are little dainty tracks — oh, such dainty tracks that none but a high-stepping, clear-cut, clean-limbed, little thoroughbred could make them! — tracks of four toes and a thumb claw much shorter than the rest, with a padding of five basal foot-bones behind the toes, tracks that show a fluff on the snow as of furred foot-soles, tracks that go in clean, neat, clear long leaps and bounds — the hunter knows that he has found the signs of the northern fox.

Here, then, he will camp for the winter. Camping in the Far North means something different from the hastily pitched tent of the prairie. The north wind blows biting, keen, unbroken in its sweep. The hunter must camp where that wind will not carry scent of his tent to the animal world. For his own sake, he must camp under shelter from that wind, behind a cairn of stones, below a cliff, in a ravine. Poles have been brought from the land of trees on the dog sleigh. These are put up, criss-crossed at top, and over them is laid, not the canvas tent, but a tent of skins, caribou, wolf, moose, at a sharp enough angle to let the snow slide off. Then snow is banked deep, completely round the tent. For fire, the Eskimo depends on whale-oil and animal grease. The white man or half-breed from the South hoards up chips and sticks. But mainly he depends on exercise and animal food for warmth. At night he sleeps in a fur bag. In the morning that bag is frozen stiff as boards by the moisture of his own breath. Need one ask why the rarest furs, which can only be produced by the coldest of climates, are so costly?

Having found the tracks of the fox, the hunter sets out his traps baited with fish or rabbit or a bird-head. If the snow be powdery enough, and the trapper keen in wild lore, he may even know what sort of fox to expect. In the depths of midwinter, the white Arctic fox has a wool fur to his feet like a brahma chicken. This

leaves its mark in the fluffy snow. A ravenous fellow he always is, this white fox of the hungry North, bold from ignorance of man, but hard to distinguish from the snow because of his spotless coat. The blue fox being slightly smaller than the full-grown Arctic, lopes along with shorter leaps, by which the trapper may know the quarry; but the blue fox is just as hard to distinguish from the snow as his white brother. The gray frost haze is almost the same shade as his steel-blue coat; and when spring comes, blue fox is the same color as the tawny moss growth. Color is blue fox's defence. Consequently blue foxes show more signs of age than white — stubby ears frozen low, battle-worn teeth, dulled claws.

The chances are that the trapper will see the black fox himself almost as soon as he sees his tracks; for the sheeny coat that is black fox's beauty betrays him above the snow. Bushy tail standing straight out, every black hair bristling erect with life, the white tail-tip flaunting a defiance, head up, ears alert, fore feet cleaving the air with the swift ease of some airy bird — on he comes, jump — jump — jump — more of a leap than a lope, galloping like a wolf, altogether different from the skulking run of little foxes, openly exulting in his beauty and his strength and his speed! There is no mistaking black fox. If the trapper does not see the black fox scurrying over the snow, the telltale characteristics of the footprints are the length and strength of the leaps. Across these leaps the hunter leaves his traps. Does he hope for a silver fox? Does every prospector expect to find gold nuggets? In the heyday of fur company prosperity, not half a dozen true silver foxes would be sent out in a year. But good white fox and black and blue are prizes enough in themselves, netting as much to the trapper as mink or beaver or sable.

II

The White Ermine

All that was said of the mystery of fox life applies equally to ermine. Why is the ermine of Wisconsin and Minnesota and

Dakota a dirty little weasel noted for killing forty chickens in a night, wearing a mahogany-colored coat with a sulphur strip down his throat, while the ermine of the Arctic is as white as snow, noted for his courage, wearing a spotless coat which kings envy, yes, and take from him? For a long time the learned men who study animal life from museums held that the ermine's coat turned white from the same cause as human hair, from senility and debility and the depleting effect of an intensely trying climate. But the trappers told a different story. They told of baby ermine born in Arctic burrows, in March, April, May, June, while the mother was still in white coat, babies born in an ashy coat something like a mouse-skin that turned to fleecy white within ten days. They told of ermine shedding his brown coat in autumn to display a fresh layer of iron-gray fur that turned sulphur white within a few days. They told of the youngest and smallest and strongest ermine with the softest and whitest coats. That disposed of the senility theory. All the trapper knows is that the whitest ermine is taken when the cold is most intense and most continuous, that just as the cold slackens the ermine coat assumes the sulphur tinges, deepening to russet and brown, and that the whitest ermine instead of showing senility, always displays the most active and courageous sort of deviltry.

Summer or winter, the northern trapper is constantly surrounded by ermine and signs of ermine. There are the tiny claw-tracks almost like frost tracery across the snow. There is the rifled nest of a poor grouse — eggs sucked, or chickens murdered, the nest fouled so that it emits the stench of a skunk, or the mother hen lying dead from a wound in her throat. There is the frightened rabbit loping across the fields in the wildest, wobbliest, most woe-begone leaps, trying to shake something off that is clinging to his throat till over he tumbles — the prey of a hunter that is barely the size of rabbit's paw. There is the water-rat flitting across the rocks in blind terror, regardless of the watching trapper, caring only to reach safety — water — water! Behind comes the pursuer

— this is no still hunt but a straight open chase — a little creature about the length of a man's hand, with a tail almost as long, a body scarcely the thickness of two fingers, a mouth the size of a bird's beak, and claws as small as a sparrow's. It gallops in lithe bounds with its long neck straight up and its beady eyes fastened on the flying water-rat. Splash — dive — into the water goes the rat! Splash — dive — into the water goes the ermine! There is a great stirring up of the muddy bottom. The water-rat has tried to hide in the under-tangle; and the ermine has not only dived in pursuit but headed the water-rat back from the safe retreat of his house. Up comes a black nose to the surface of the water. The rat is foolishly going to try a land race. Up comes a long neck like a snake's, the head erect, the beady eyes on the fleeing water-rat — then with a splash they race overland. The water-rat makes for a hole among the rocks. Ermine sees and with a spurt of speed is almost abreast when the rat at bay turns with a snap at his pursuer. But quick as flash, the ermine has pirouetted into the air. The long writhing neck strikes like a serpent's fangs and the sharp fore teeth have pierced the brain of the rat. The victim dies without a cry, without a struggle, without a pain. That long neck was not given the ermine for nothing. Neither were those muscles massed on either side of his jaws like bulging cheeks.

In winter the ermine's murderous depredations are more apparent. Now the ermine, too, sets itself to reading the signs of the snow. Now the ermine becomes as keen a still hunter as the man. Sometimes a whirling snow-fall catches a family of grouse out from furze cover. The trapper, too, is abroad in the snow-storm; for that is the time when he can set his traps undetected. The white whirl confuses the birds. They run here, there, everywhere, circling about, burying themselves in the snow till the storm passes over. The next day when the hunter is going the rounds of these traps, along comes an ermine. It does not see him. It is following a scent, head down, body close to ground, nose here, there, threading the maze which the crazy grouse had run. But stop, thinks

the trapper, the snow-fall covered the trail. Exactly — that is why the little ermine dives under snow just as it would under water, running along with serpentine wavings of the white powdery surface till up it comes again where the wind has blown the snow-fall clear. Along it runs, still intent, quartering back where it loses the scent — along again till suddenly the head lifts — that motion of the snake before it strikes! The trapper looks. Tail feathers, head feathers, stupid blinking eyes poke through the fluffy snow-drift. And now the ermine no longer runs openly. There are too many victims this time — it may get all the foolish hidden grouse; so it dives and if the man had not alarmed the stupid grouse, ermine would have darted up through the snow with a finishing stab for each bird.

By still hunt and open hunt, by nose and eye, relentless as doom, it follows its victims to the death. Does the bird perch on a tree? Up goes the ermine, too, on the side away from the bird's head. Does the mouse thread a hundred mazes and hide in a hole? The ermine threads every maze, marches into the hidden nest and takes murderous possession. Does the rat hide under rock? Under the rock goes the ermine. Should the trapper follow to see the outcome of the contest, the ermine will probably sit at the mouth of the rat-hole, blinking its beady eyes at him. If he attacks, down it bolts out of reach. If he retires, out it comes looking at this strange big helpless creature with bold contempt.

The keen scent, the keen eyes, the keen ears warn it of an enemy's approach. Summer and winter, its changing coat conceals it. The furze where it runs protects it from fox and lynx and wolverine. Its size admits it to the tiniest of hiding-places. All that the ermine can do to hunt down a victim, it can do to hide from an enemy. These qualities make it almost invincible to other beasts of the chase. Two joints in the armor of its defence has the little ermine. Its black tail-tip moving across snow betrays it to enemies in winter: the very intentness on prey, its excess of self-confidence, leads it into danger; for instance, little ermine is royally contemptuous of

man's tracks. If the man does not molest it, it will follow a scent and quarter and circle under his feet; so the man has no difficulty in taking the little beast. So bold are the little creatures that the man may discover their burrows under brush, in rock, in sand holes, and take the whole litter before the game mother will attempt to escape. Indeed, the plucky little ermine will follow the captor of her brood. Steel rat traps, tiny deadfalls, frosted bits of iron smeared with grease to tempt the ermine's tongue which the frost will hold like a vice till the trapper comes, and, most common of all, twine snares such as entrap the rabbit, are the means by which the ermine comes to his appointed end at the hands of men.

The quality of the pelt shows as wide variety as the skin of the fox; and for as mysterious reasons. Why an ermine a year old should have a coat like sulphur and another of the same age a coat like swan's down, neither trapper nor scientist has yet discovered. The price of the ermine-pelt used to be higher than any other of the rare furs taken in North America except silver fox; but it no longer commands the fabulous prices that were certainly paid for specimen ermine-skins in the days of the Georges in England and the later Louis in France. How were those fabulously costly skins prepared? Old trappers say no perfectly downy pelt is ever taken from an ermine, that the downy effect is produced by a trick of the trade — scraping the flesh side so deftly that all the coarse hairs will fall out, leaving only the soft under-fur.

CHAPTER XI

WHAT THE TRAPPER STANDS FOR

WAGING ceaseless war against beaver and moose, types of nature's most harmless creatures, against wolf and wolverine, types of nature's most destructive agents, against traders who were rivals and Indians who were hostiles, the trapper would almost seem to be himself a type of nature's arch-destroyer.

Beautiful as a dream is the silent world of forest and prairie and mountain where the trapper moves with noiseless stealth of the most skilful of all the creatures that prey. In that world, the crack of the trapper's rifle, the snap of the cruel steel jaws in his trap, seem the only harsh discords in the harmony of an existence that riots with a very fulness of life. But such a world is only a dream. The reality is cruel as death. Of all the creatures that prey, man is the most merciful.

Ordinarily, knowledge of animal life is drawn from three sources. There are park specimens, stuffed to the utmost of their eating capacity and penned off from the possibility of harming anything weaker than themselves. There are the private pets fed equally well, pampered and chained safely from harming or being harmed. There are the wild creatures roaming natural haunts, some two or three days' travel from civilization, whose natures have been gradually modified generation by generation from being constantly hunted with long-range repeaters. Judging from these sorts of wild animals, it certainly seems that the brute creation has been sadly maligned. The bear cubs lick each other's paws with an amatory singing that is something between the purr of a cat and the grunt of a pig. The old polars wrestle like boys out of school,

flounder in grotesque gambols that are laughably clumsy, good-naturedly dance on their hind legs, and even eat from their keepers' hand. And all the deer family can be seen nosing one another with the affection of turtle-doves. Surely the worst that can be said of these animals is that they shun the presence of man. Perhaps some kindly sentimentalist wonders if things hadn't gone so badly out of gear in a certain historic garden long ago, whether mankind would not be on as friendly relations with the animal world as little boys and girls are with bears and baboons in the fairy books. And the scientist goes a step further, and soberly asks whether these wild things of the woods are not kindred of man after all; for have not man and beast ascended the same scale of life? Across the centuries, modern evolution shakes hands with old-fashioned transmigration.

To be sure, members of the deer family sometimes kill their mates in fits of blind rage, and the innocent bear cubs fall to mauling their keeper, and the old bears have been known to eat their young. These things are set down as freaks in the animal world, and in nowise allowed to upset the inferences drawn from animals living in unnatural surroundings, behind iron bars, or in haunts where long-range rifles have put the fear of man in the animal heart.

Now the trapper studies animal life where there is neither a pen to keep the animal from doing what it wants to do, nor any rifle but his own to teach wild creatures fear. Knowing nothing of science and sentiment, he never clips facts to suit his theory. On the truthfulness of his eyes depends his own life, so that he never blinks his eyes to disagreeable facts.

Looking out on the life of the wilds clear-visioned as his mountain air, the trapper sees a world beautiful as a dream but cruel as death. He sees a world where to be weak, to be stupid, to be dull, to be slow, to be simple, to be rash are the unpardonable crimes; where the weak must grow strong, keen of eye and ear and instinct, sharp, wary, swift, wise, and cautious; where in a word the weak must grow fit to survive or — perish!

The slow worm fills the hungry maw of the gaping bird. Into the soft fur of the rabbit that has strayed too far from cover clutch the swooping talons of an eagle. The beaver that exposes himself overland risks bringing lynx or wolverine or wolf on his home colony. Bird preys on worm, mink on bird, lynx on mink, wolf on lynx, and bear on all creatures that live from men and moose down to the ant and the embryo life in the ant's egg. But the vision of ravening destruction does not lead the trapper to morbid conclusions on life as it leads so many housed thinkers in the walled cities; for the same world that reveals to him such ravening slaughter shows him that every creature, the weakest and the strongest, has some faculty, some instinct, some endowment of cunning, or dexterity or caution, some gift of concealment, of flight, of semblance, of death — that will defend it from all enemies. The ermine is one of the smallest of all hunters, but it can throw an enemy off the scent by diving under snow. The rabbit is one of the most helpless of all hunted things, but it can take cover from foes of the air under thorny brush, and run fast enough to outwind the breath of a pursuer, and double back quick enough to send a harrying eagle flopping head over heels on the ground, and simulate the stillness of inanimate objects surrounding it so truly that the passer-by can scarcely distinguish the balls of fawn fur from the russet bark of a log. And the rabbit's big eyes and ears are not given it for nothing.

Poet and trapper alike see the same world, and for the same reason. Both seek only to know the truth, to see the world as it is; and the world that they see is red in tooth and claw. But neither grows morbid from his vision; for that same vision shows each that the ravening destruction is only a weeding out of the unfit. There is too much sunlight in the trapper's world, too much fresh air in his lungs, too much red blood in his veins for the morbid miasmas that bring bilious fume across the mental vision of the housed city man.

And what place in the scale of destruction does the trapper

occupy? Modern sentiment has almost painted him as a red-dyed monster, excusable, perhaps, because necessity compels the hunter to slay, but after all only the most highly developed of the creatures that prey. Is this true? Arch-destroyer he may be; but it should be remembered that he is the destroyer of destroyers.

Animals kill young and old, male and female.

The true trapper does not kill the young; for that would destroy his next year's hunt. He does not kill the mother while she is with the young. He kills the grown males which — it can be safely said — have killed more of each other than man has killed in all the history of trapping. Wherever regions have been hunted by the pot-hunter, whether the sportsman for amusement or the settler supplying his larder, game has been exterminated. This is illustrated by all the stretch of country between the Platte and the Saskatchewan. Wherever regions have been hunted only by the trapper, game is as plentiful as it has ever been. This is illustrated by the forests of the Rockies, by the No-Man's Land south of Hudson Bay and by the Arctics. Wherever the trapper has come destroying grizzly and coyote and wolverine, the prong horn and mountain-sheep and mountain-goat and wapiti and moose have increased.

But the trapper stands for something more than a game warden, something more than the most merciful of destroyers. He destroys *animal* life — a life which is red in tooth and claw with murder and rapine and cruelty — in order that *human* life may be preserved, may be rendered independent of the elemental powers that wage war against it.

It is a war as old as the human race, this struggle of man against the elements, a struggle alike reflected in Viking song of warriors conquering the sea, and in the Scandinavian myth of pursuing Fenris wolf, and in the Finnish epic of the man-hero wresting secrets of life-bread from the earth, and in Indian folk-lore of a Hiawatha hunting beast and treacherous wind. It is a war in which the trapper stands forth as a conqueror, a creature sprung of earth,

trampling all the obstacles that earth can offer to human will under his feet, finding paths through the wilderness for the explorer who was to come after him, opening doors of escape from stifled life in crowded centres of population, preparing a highway for the civilization that was to follow his own wandering trail through the wilds.

APPENDIX TO PART II

WHEN in Labrador and Newfoundland a few years ago, the writer copied the entries of an old half-breed woman trapper's daily journal of her life. It is fragmentary and incoherent, but gives a glimpse of the Indian mind. It is written in English. She was seventy-five years old when the diary opened in December, 1893. Her name was Lydia Campbell and she lived at Hamilton Inlet. Having related how she shot a deer, skinning it herself, made her snow-shoes and set her rabbit snares, she closes her first entry with:

"Well, as I sed, I can't write much at a time now, for i am getting blind and some mist rises up before me if i sew, read or write a little while."

Lydia Campbell's mother was captured by Eskimo. She ran away when she had grown up, to quote her own terse diary, "crossed a river on drift sticks, wading in shadows, through woods, meeting bears, sleeping under trees — seventy miles flight — saw a French boat — took off skirt and waved it to them — came — took my mother on board — worked for them — with the sealers — camped on the ice.

"As there was no other kind of women to marrie hear, the few English men each took a wife of that sort and they never was sorry that they took them, for they was great workers and so it came to pass that I was one of the youngest of them." [Meaning, of course, that she was the daughter of one of these marriages.]

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"Our young man pretended to spark the two dauhgters of Tomas. He was a one-armed man, for he had shot away one arm firing at a large bird. . . . He double-loaded his gun in his fright, so the por man lost one of his armes, . . . he was so smart with his gun that he could bring down a bird flying past him, or a deer running past he would be the first to bring it down."

"They was holden me hand and telling me that I must be his mother now as his own mother is dead and she was a great friend of mine although we could not understand each other's language sometimes, still we could make it out with sins and wonders."

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"April 7, 1894. — Since I last wrote on this book, I have been what people call cruising about here. I have been visiting some of my friends, though scattered far apart, with my snow-shoes and axe on my shoulders. The nearest house to this place is about five miles up a beautiful river, and then through woods, what the french calls a portage — it is what I call pretty. Many is the time that I have been going with dogs and komatick 40 or 50 years ago with my husband and family to N. W. River, to the Hon. Donald A. Smith and family to keep N. Year or Easter."

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"My dear old sister Hannah Mishlin who is now going on for 80 years old and she is smart yet, she hunts fresh meat and chops holes in the 3 foot ice this very winter and catches trout with her hook, enough for her household, her husband not able to work, he has a bad complaint."

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"You must please excuse my writing and spelling for I have never been to school, neither had I a spelling book in my young day — me a native of this country, Labrador, Hamilton's Inlet, Esquimaux Bay — if you wish to know who I am, I am old Lydia Campbell, formerly Lydia Brooks, then Blake, after Blake, now Campbell. So you see ups and downs has been my life all through, and now I am what I am — prais the Lord."

"I have been hunting most every day since Easter, and to some of my rabbit snares and still traps, cat traps and mink traps. I caught 7 rabbits and 1 marten and I got a fix and 4 partridges, about 500 trout besides household duties — never leave out morning and Evening prayers and cooking and baking and washing for 5 people — 3 motherless little children — with so much to make for sale out of seal skin and deer skin shoes, bags and pouches and what not. . . . You can say well done

old half-breed woman in Hamilton's Inlet. Good night, God bless us all and send us prosperity.

"Yours ever true,

"LYDIA CAMPBELL."

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 "We are going to have an evening worship, my poor old man is tired, he has been a long way today and he shot 2 beautiful white partridges. Our boy heer shot once spruce partridge."

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 "Caplin so plentiful boats were stopped, whales, walrusses and white bears."

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 "Muligan River, May 24, 1894. — They say that once upon a time the world was drowned and that all the Esquimaux were drowned but one family and he took his family and dogs and chattels and his seal-skin boat and Kiak and Komaticks and went on the highest hill that they could see, and stayed there till the rain was over and when the water dried up they descended down the river and got down to the plains and when they could not see any more people, they took off the bottoms of their boots and took some little white [seal] pups and sent the poor little things off to sea and they drifted to some islands far away and became white people. Then they done the same as the others did and the people spread all over the world. Such was my poor father's thought. . . . There is up the main river a large fall, the same that the American and English gentlemen have been up to see. [Referring to Mr. Bryant, of Philadelphia, who visited Grand Falls.] Well there is a large whirlpool or hole at the bottom of the fall. The Indians that frequent the place say that there is three women — Indians — that lives under that place or near to it I am told, and at times they can hear them speaking to each other louder than the roar of the falls." [The Indians always think the mist of a waterfall signifies the presence of ghosts.]

"I have been the cook of that great Sir D. D. Smith that is in Canada at this time. [In the days when Lord Strathcona was chief trader at Hamilton Inlet.] He was then at Rigolet Post, a chief trader only, now

what is he so great! He was seen last winter by one of the women that belong to this bay. She went up to Canada. . . and he is gray headed and bended, that is Sir D. D. Smith."

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"August 1, 1894. — My dear friends, you will please excuse my writing and spelling — the paper sweems by me, my eyesight is dim now ——"

"A NATIONAL INSTITUTION"

FUNSTEN BROS. & CO.

INTERNATIONAL FUR EXCHANGE, INCORPORATED. PUBLIC AUCTION FUR SALES,
ST. LOUIS, U. S. A., WILL OFFER FOR SALE BY PUBLIC AUCTION THROUGH THE
INTERNATIONAL FUR EXCHANGE, SECOND AND ELM STREETS, ST. LOUIS, MON-
DAY, MAY 10TH, 1920, AND DAYS FOLLOWING AT TEN O'CLOCK, FORENOON,
PRECISELY THE FOLLOWING GOODS, VIZ. :

Monday — May 10th

ACCOUNT UNITED STATES GOV'T —

6,000 Alaska Seal

Dressed, dyed and machined

ACCOUNT JAPANESE GOVERNMENT —

772 Raw Seal

ACCOUNT OTHER SHIPPERS —

5,500 Alaska Seal

Dressed, dyed and machined

568 Broadtail

17,000 Persian and Schiras

1,500 Fisher

14,000 Marten

6,000 Stone Marten

2,500 Baum Marten

Tuesday — May 11th

9,600 Badger

28,000 House Cat

180 Wolverine

11,000 White Fox

1,000 Blue Fox

2,100 Cross Fox

1,200,000 Squirrel

Wednesday — May 12th

2,000 Bear

2,675 Hair Seal

350 Mountain Lion

119 Leopard and Leopard Cat

4,600 Reindeer

550,000 Opossum

Thursday — May 13th

1,500 Silver Fox

Friday — May 14th

16,500 Wildcat

15,000 Lynx Cat

2,900 Lynx

175,000 Raccoon

Saturday — May 15th

2,400 Viscacha

10,000 Chinchilla Rat

2,400 Chinchilla

180,000 Ermine, White

35,000 Ermine, Grey

80,000 Ermine, Brown

Monday — May 17th

160,000 Mink

<i>Tuesday — May 18th</i>	<i>Tuesday — May 25th</i>
7,800 Russian Sable	150,000 Fitch
37 Japanese Sable	2,250,000 Mole
7 Sea Otter	150,000 Kolinsky
<i>Wednesday — May 19th</i>	<i>Wednesday — May 26th</i>
90,000 Red Fox	32,225 doz. Coney, Sealine, Near Seal and Moline
<i>Thursday — May 20th</i>	1,500 Sealine Plates
400,000 Skunk	200 Near Seal Plates
<i>Friday — May 21st</i>	16,000 China Mink
157,000 Rabbits, Dutch and Belgian	80,000 Japanese Mink
190,000 lbs. Australian Rabbit	10,000 Japanese Fox
145,000 lbs. New Zealand Rabbit	7,000 Japanese Marten
4,800 Otter	10,000 Flying Squirrel
150,000 Nutria	12,000 Goat Rugs
1,300 Guanaco	140,000 Dog Mats
1,000 Pahmi	3,400 Dog Robes
10,500 Dressed Lamb	1,800 Thibet Robes
19,000 Dyed Lamb	5,000 Thibet Skins
25,000 Wombat	31,000 Barunduki
15,000 Wallaby	6,700 White Kid Skins
3,200 Kangaroo	Sundries, Dressed and Dyed Furs
450,000 White Hare	<i>Thursday — May 27th</i>
<i>Saturday — May 22nd</i>	16,000 Grey Fox
550,000 Marmot	16,000 Ringtail Cat
65,000 Australian Red Fox	175,000 Civet Cat
7,000 Macedonian Red Fox	70,000 Wolf
1,475 Swift Fox	<i>Friday — May 28th</i>
22,000 South American Fox	15,000 Pony
<i>Monday — May 24th</i>	150,000 Australian Ringtail Opossum
800,000 Muskrat	150,000 Ringtail Opossum
240,000 Muskrat, Southern	21,000 Beaver
40,000 Muskrat, Black	
60,000 Seal Dyed Muskrat	
500 Seal Dyed Muskrat Plates	

GOODS ON SHOW ON AND AFTER MAY 3RD AT FUNSTEN BROS. & Co.'s WAREHOUSES,
ST. LOUIS.

PROMPT DAY — JUNE 25TH

GEORGE B. HERZIG CO., INC., *Agents*
252-254 West 28th Street, New York

LONDON SPRING PUBLIC FUR AUCTION SALE 1920, COMMENCING
THURSDAY, APRIL 22, 1920, AND FOLLOWING DAYS

TOTAL QUANTITIES TO BE OFFERED BY THE VARIOUS BROKERS

1,100,000	Skunk	156,000	Opossum, Australian
661,000	Muskrat	130,000	Wallaby, Australian
1,034,000	Opossum	120,000	Foxes, Australian
66,000	Raccoon	3,200	Chinchilla
99,000	Civet Cat	20,500	Nutria
38,000	Mink	2,000	Nutria, sacs
700	Fox, Silver	3,200	Moufflon
1,500	Fox, Cross	2,100	Leopard
110,000	Fox, Red	2,200	Kangaroo
20,900	Fox, White	5,800	Kolinsky
800	Fox, Blue	39,500	Fitch
40,000	Fox, Grey	2,000,000	Mole
65,000	Fox, Kitt	50	Mole, plates
2,200	Fox, dyed	80,000	Marmot
5,300	Fox, tails	6,000	Marmot, dyed
16,000	Fox, Japanese	727,000	Squirrel, raw
14,300	Beaver	26,000	Squirrel, backs dyed
5,400	Otter	16,000	Squirrel, skins dyed
700	Lynx	3,800	Squirrel, skins dressed
500	Wolverine	15,500	Squirrel, backs
1,600	Fisher	1,500	Squirrel, sacs
15	Sea Otter	3,500	lbs. Squirrel, tails
200,000	Ermine	218,000	Hare, white
2,000	Sable	12,500	Hare, dyed
4,900	Marten	42,500	Lamb
1,900	Marten, Baum	24,700	Lamb, Persian
10,400	Marten, Stone	150,000	Lamb, Thibet
2,800	Marten, tails	5,000	Lamb, Thibet, Coats & Crosses
6,300	Bear	18,000	Lamb, Slink
80,000	Wolf	30,000	Lamb, Slink, Crosses
5,300	Cat, wild	80,000	Rabbit, dressed
44,500	Cat, house	600,000	Rabbit, raw
17,500	Badger	107,000	Rabbit, dyed
400	Fur Seal, dyed	12,000	Rabbit, linings
800	Fur Seal, salted	3,400	Rabbit, strips
500	Hair Seal	6,300	Rabbit Crosses

146,000	Goat	7,400	Hamster, skins
85,000	Kid, skins	1,700	Hamster, sacs
15,500	Kid, crosses	5,700	Kolinsky, tails
13,000	Muskrat, electric skins	1,700	Fitch, tails
2,500	Muskrat, electric strips	6,400	Guanaco
3,300	Flying Squirrel	500	Monkey
25,000	Opossum, dyed	67	Musk Ox
3,000	Wolf, dyed	1,500	Tiger
6,000	Wallaby, dyed	10,000	Pahmi
5,000	Kolinsky, dyed	13,000	Chinese Raccoon
500	Otter, dyed	7,000	Chinese Badger
1,800	Broadtail, dyed	33,000	Goat Rugs
30,100	Ringtail	8,300	Dog Mats and Robes
62,000	Fox, South American	18,000	Sheep
11,600	Ermine, tails	22,000	Gazelle

NEW YORK'S FUR MARKET REPORT

For the Shipper and Dealer in Furs

APRIL 14TH, 1920

THE NEW YORK FUR AUCTION SALES CORPORATION

*Order of Sale**Monday — April 19th*

719	Fisher
3,844	Stone Marten
2,656	Baum Marten
6,869	Marten
783	Cross Fox
3,084	White Fox
2,000	White Fox Paws
390	Blue Fox
58,003	Nutria

Tuesday — April 20th

14,086	Sundry Fox
331	Silver Fox
24,808	Red Fox
1,613	Otter

Wednesday — April 21st

	Sundries
19,320	Tails
24,004	House Cat
1,957	Pony
412	Leopard
73,725	Ermine
1,269	Chinchilla
1,619	Russian Sable
3	Sea Otter
3,332	Ringtail Cat
245,648	Opossum

Thursday — April 22nd

1,942	Badger
556	Lynx

11,803	Wild Cat
1,211,692	Mole
232,471	Muskrat, Brown
16,914	Muskrat, Black
80,273	Muskrat, Southern
131,468	Ringtail Opossum
12,147	Wallaby
<i>Friday — April 23rd</i>	
24,818	Wombat
946	Kangaroo
122,642	lbs. Australian and New Zealand Rabbit
9,913	Rabbit
9,667	White Hares
384,397	Squirrel
24,234	Wolf
204,528	Australian Opossum
11,469	Tasmanian Opossum
<i>Saturday — April 24th</i>	
89	Wolverine
275	Black Bear
27	Brown Bear

14	Grizzly Bear
15	Polar Bear
98,673	Civet Cat
24,081	Kolinsky
910	Hair Seal
60,248	Fitch
188,342	Skunk
<i>Monday — April 26th</i>	
18,237	Japanese Mink
97	Japanese Badger
1,572	Japanese Marten
4,997	Japanese Flying Squirrel
71,843	Mink
<i>Tuesday — April 27th</i>	
29,683	Australian Fox
5,982	Grey Fox
1,582	Persian Lamb
12,788	Chinese Weasel
2,945	Chinese Civet Cat
180,109	Marmot
78,310	Raccoon
9,902	Beaver

Sundries consist of (239) Bulgarian Cat, (197) Hungarian Cat, (315) Broadtail, (320) Caracul, (505) Wallaroo, (1933) Chinchilla Rats, (80) Paddy Melon, (469) Leopard Cat, (336) Fawns, (187) Golyak, (1215) Mountain Beaver, (2210) Guanaco.

NEW YORK FUR AUCTION SALES CORPORATION
48-50-52 Great Jones Street, New York.

THE FUR TRADE OF AMERICA

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MONTREAL MARCH (1920) FUR SALES

SKIN	NUMBER	VALUE	HIGH	LOW	AVERAGE
Muskrat	243,040	\$1,057,104	\$7.50	\$.45	\$4.35
Wolf	5,395	120,016	45.25	5.00	22.24
White Fox	667	41,083	70.00	28.00	61.55
Fitch	5,000	14,875	3.30	2.05	2.97
Fisher	1,393	206,467	345.00	20.00	148.58
Lynx	686	30,941	62.50	15.25	45.10
Silver Fox	767	241,614	1225.00	1.50	315.01
Cross Fox	404	36,288	200.00		89.00
Mink	21,941	427,599			19.00
Beaver		728,735			
Squirrel		134,338			
Marten	3,400		201.00	18.00	
Russian Sable	109		390.00	145.00	
Stone Marten	275		32.50		
Red Fox	6,703		50.00	5.00	
Wombat	4,253		2.50	1.45	
Kangaroo			6.00	.80	
Raccoon	43,000		30.00	5.00	
Moleskins	248,728	110,073			.44
Persian Lamb	7,229	60,720			8.40
Musk Ox	28	3,457			123.50
Bear	345	7,234			21.00
Buffalo Hides and Robes . .			150.00	65.00	

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